IN THE CLAIMS:

Claims 1 through 84 were previously cancelled.

85. (Previously Presented) A method for locating a terrestrial mobile station, **M**, when there is an occurrence of at least one of (A) and (B) following: (A) said terrestrial mobile station **M** being tracked, and (B) a request for locating said terrestrial mobile station **M**; wherein said method uses wireless signal measurements obtained from transmissions between said terrestrial mobile station **M** and a plurality of terrestrial communication stations, each capable of at least one of: wirelessly detecting said terrestrial mobile station **M**, and wirelessly being detected by said terrestrial mobile station **M**, comprising:

receiving location related information from at least first and second mobile station location estimators, wherein said location estimators provide different geographical indications of an unknown location of said mobile station **M** when said location estimators are supplied with corresponding input data obtained using wireless signal measurements obtained by transmissions between said mobile station **M** and the communication stations, the transmissions including spread spectrum signals;

wherein said first location estimator performs one or more of the following techniques (a) through (d) when supplied with said corresponding input data:

(a) a first technique for determining, for at least one of the communication stations, **CS**, at least one of (i) and (ii) following:

(i) a distance between the communication station **CS** and the mobile station **M**, said distance dependent upon signal time delay derived information, wherein for determining the distance, two way communication between the mobile station **M** and the communication station **CS** is used, and

(ii) an angular orientation about the communication station **CS** of a direction of the mobile station **M** determined using a measurement of a wireless signal angle of arrival of wireless signals transmitted between the mobile station **M** and the communication station **CS**,

wherein said at least one communication station **CS** is stationary;

(b) a learning technique, wherein said learning technique uses a learned association for associating (b1) and (b2) following:

(b1) information obtained from at least one of signal strength and signal time delay measurements of wireless signals communicated between the mobile station **M** and the communication stations, and

(b2) data identifying a likely geographical indication for a location for the mobile station **M**,

wherein said association is learned by a training process using a plurality of data pairs, each said data pair including: first information identifying a known location of some mobile station, and second information from wireless signal measurements communicated between said some mobile station and one or more of the communication stations when said some mobile station is at the known location;

(c) a stochastic technique, wherein said stochastic technique uses a statistical correlation for correlating (c1) and (c2) following:

(c1) information obtained from at least one of signal strength and signal time delay measurements of wireless signals between the mobile station **M** and the communication stations, and

(c2) data, **D**, wherein for each location $\mathbf{L_c}$ of a plurality of locations, said data **D** includes one or more wireless signal measurements related to a wireless communication between some mobile station different from the mobile station **M** when the different mobile station is substantially at $\mathbf{L_c}$, and,

wherein said correlation is used for determining a likely geographical indication, **GR**, for a location for the mobile station **M** and data indicative of a probability that the mobile station **M** is within the likely geographical indication **GR**;

(d) a signal location technique for determining a geographical indication (**L**) for a location of the mobile station **M**, wherein for determining the geographical indication **L**, (d1) - (d2) following hold:

(d1) the signal location technique is dependent upon characteristics of wireless signals obtained from wireless signal information communicated between the mobile station **M** and the communication stations; and

(d2) the signal location technique is dependent upon (i) and (ii) following: (i) a representation of each of a plurality of geographical locations, and (ii) for each of the geographical locations, corresponding wireless signal characteristics of

previously obtained using transmissions between some mobile station ($\mathbf{M_d}$) different from **M**, and the communication stations, when the some mobile station $\mathbf{M_d}$ transmitted from approximately the geographical location;

wherein said signal location technique performs a step of determining **L** as being closer to one or more of the geographical locations of (d2)(i), when a greater similarity is determined between the corresponding wireless signal characteristics for the one or more of the geographical locations, and the characteristics of wireless signals of (d1);

wherein said determining step uses signal characteristics indicative of multipath for determining the similarity;

wherein said receiving step includes the first and second receiving steps following:

first receiving, from said first location estimator, in response to said first location estimator obtaining a first instance of its said corresponding input data for said at least one occurrence, first location related information having at least a first geographical indication for a location of the mobile station **M**;

second receiving, from said second location estimator, in response to said second location estimator obtaining a second instance of its said corresponding input data for said at least one occurrence, second location related information having at least a second geographical indication for the location of the mobile station **M**;

wherein for locating the mobile station **M** in at least one location, at least one of said first and second geographical indications for **M** is dependent upon a delay time of a signal from at least one non-terrestrial wireless transmitter above and not supported on the Earth's surface, to **M** for determining a spatial range between **M** and the at least one non-terrestrial wireless transmitter; and

outputting a resulting location estimate of the mobile station **M**, a determination of said resulting location estimate is dependent upon at least one of (a) and (b) following: (a) a first value obtained from said first location related information, and (b) a second value obtained from said second location related information.

86 (Previously Presented) The method as claimed in Claim 85, further including:

first supplying said first location estimator with said first instance; and

second supplying said second location estimator with said second instance;

wherein at least one of said steps of: first and second supplying, and, first and second receiving uses a transmission using TCP/IP.

87. (Previously Presented) The method as claimed in Claim 85, wherein said mobile station **M** has a receiver provided therewith for receiving satellite signals, and at least one of said steps of first and second receiving includes receiving information indicative of the at least one geographical indication, said information dependent upon measurements of satellite signals received by the receiver.

88. (Previously Presented) The method as claimed in Claim 85, further including a step of receiving a transmission, through a telecommunications network, of said first location estimator from a source site to an activation site for generating said first geographical indication.

89. (Previously Presented) The method as claimed in Claim 88, wherein said step of receiving the transmission includes receiving an encoding of said first location estimator via the Internet.

Please amend claim 90 as follows:

90. (Currently Amended) The method as claimed in Claim 85, further including a step of retrieving at least one of (i) and (ii) following, for a location estimator (**LE**) being one <u>of</u> at least one of the first and second location estimators,

(i) a selected set of geographical locations from an archive of geographical locations for a collection of one or more actual mobile station locations, said geographical locations of said archive generated by a location estimator $\mathbf{LE_1}$ wherein $\mathbf{LE_1}$ and **LE** are substantially effectively equivalent when generating said geographical locations using first data obtained from wireless signal measurements of transmissions between: (1) one or more of a plurality of mobile stations, at said actual locations, and (2) said plurality of communication stations;

wherein at least one of said archived geographical locations is selected for being included in said selected set by determining that a predetermined condition is satisfied by a value related to a distance between: (a) said corresponding one of said first and second geographical indications for the location of the mobile station **M** received from **LE**, and (b) said at least one archived geographical location; and

(ii) data for more accurately identifying said one or more mobile station actual locations corresponding to the geographical locations in said selected set.

Please amend claim 91 as follows:

91. (Currently Amended) The method as claimed in Claim 85, further including, for at least one geographical indication, GI, of said first and second geographical indications, a step of obtaining a likelihood value that the at least one geographical indication GI includes said mobile station **M**, wherein said likelihood value is obtained using previous likely geographical indications for one or more mobile station locations generated by a location estimator **LE**, wherein LE and the location estimator that generated said at least one geographical indication GI are substantially effectively equivalent when generating geographical indications of mobile stations.

Claims 92 and 93 previously cancelled.

94. (Previously Presented) The method as claimed in Claim 85, further including performing a first simulation for predicting a likelihood of said mobile station **M** being in said first geographical indication, wherein said simulation uses pairs of location representations, wherein for each pair (P), a first member of the pair P includes a geographical indication ($\mathbf{GR_P}$) obtained from a location estimator LE, wherein LE and said first location estimator are substantially effectively equivalent when generating said geographical indication GR_P for locating some mobile station, and a second member of the pair P includes a representation of an independently determined location of the some mobile station.

95. (Previously Presented) The method as claimed in Claim 85, wherein at least one of said first and second location estimators utilize one of the following:

(a) a pattern recognition location technique for estimating a location of said mobile station **M** by recognizing a pattern of characteristics of said corresponding input data obtained from at least first and second transmission paths of multiple transmission paths of the transmissions between said mobile station **M** and at least one of the communication stations;

(b) a mobile base station estimator for estimating a location of said mobile station **M** from location information received from a mobile base station detecting wireless transmissions of said mobile station **M**; and

(c) a coverage area location technique for estimating a location of said mobile station **M** by determining an area of wireless coverage area for one of said communication stations.

96. (Previously Presented) The method as claimed in Claim 85, wherein at least one of the following (a) through (c) holds:

(a) for said learning technique, said association is provided, at least in part, by an artificial neural network for recognizing a pattern of characteristics of location information obtained from said wireless signal measurements;

(b) said first technique provides the distance between the mobile station **M** and said at least one communication station using one or more of: a wireless signal time of arrival, a wireless signal time difference of arrival, and a wireless signal strength indication; and

(c) said stochastic technique provides said statistical correlation using one of: principle decomposition, least squares, and partial least squares.

97. (Previously Presented) A method for estimating, for each mobile station **M** of a plurality of mobile stations, an unknown terrestrial location, L, for **M** using wireless signal measurements obtained from transmissions between said mobile station **M** and a plurality of fixed location terrestrial communication stations, wherein each of said communications stations is substantially co-located with one or more of a transmitter and a receiver for wirelessly communicating with said mobile station **M**, comprising:

initiating one or more requests for information related to the location of said mobile station **M** with one or more mobile station location evaluators such that when said location evaluators are supplied with corresponding input data having values obtained using wireless signal measurements obtained via transmissions between said mobile station **M** substantially at L, and the communication stations, said one or more location evaluators perform at least two of the following techniques (i), (ii) and (iii):

(i) a first technique for estimating where said mobile station **M** is located using signal time delay values obtained from signals received at the mobile station **M** from one or more satellites, wherein said first technique uses said signal time delay values for determining one or more distances between said mobile station **M** and said one or more satellites;

(ii) a second technique for recognizing a pattern in wireless signal characteristics, wherein said second technique includes the steps of (a) and (b) following:

(a) associating, for each location L_a of a plurality of geographical locations, (a1) and (a2) following:

(a1) a representation of the geographical location L_a, and

(a2) for the geographical location L_a, corresponding information indicative of one or more characteristics of wireless signals previously transmitted between some mobile station (M_2) and the communication stations, when the some

mobile station M_2 transmitted from approximately the geographical location L_a, the mobile station M_2 different from **M**; and

(b) determining one or more likely location estimates for **M** by identifying a similarity in a pattern between (b1) and (b2) following: (b1) one or more wireless signal characteristics determined from wireless signals communicated between the mobile station **M** and the communication stations, and (b2) the information of (a2) for a collection of one or more of the plurality of geographical locations; and

(iii) a third technique, wherein said third technique uses a statistical correlation for correlating (c) and (d) following:

(c) values that are a function of at least one of: a signal strength and a signal time delay of wireless signals between said mobile station **M** and the communication stations, and

(d) information indicative of: a plurality of collections of wireless signal measurements, wherein for each said collection, there is a known location S where said collection is obtained from transmissions between said communication stations and some mobile station (M_3) at the location S, M_3 different from **M**;

wherein said correlation is used for determining that the mobile station **M** is within a corresponding geographic area;

obtaining a first collection of one or more location estimates of said mobile station **M**, from said one or more location evaluators using said corresponding input data;

wherein for locating at least one mobile station $\mathbf{M_k}$ of the plurality of mobile stations, at least one of said one or more of the location evaluators determines a geographical indication for $\mathbf{M_k}$ using a delay time of a signal from at least one of the satellites to $\mathbf{M_k}$ for determining a spatial range between said mobile station $\mathbf{M_k}$ and the at least one satellite, and said step of obtaining obtains the geographical indication for $\mathbf{M_k}$ when $\mathbf{M_k}$ is an instance of **M**;

wherein said step of obtaining requires two way communication between the mobile station **M** and at least one of the communication stations prior to performing any of said first, second and third techniques;

transmitting, to a predetermined destination via a communications network, resulting information related to the location L of said mobile station **M**, wherein said resulting information is dependent on at least said first collection of location estimates.

98 (Previously Presented) The method of Claim 97, further including the following steps:

second obtaining, from a second set of said one or more location evaluators, a second collection of one or more location estimates using values obtained from wireless signal measurements for a time different from a time of the transmissions between the mobile station **M** and the communication stations for supplying said corresponding input data for the first collection;

determining, as part of said resulting information, a resulting location estimate of the mobile station **M**, wherein said resulting location estimate is dependent upon: (a) a first data obtained from said first collection of location estimates, and (b) a second data obtained from said second collection of location estimates.

Please amend Claim 99 as follows:

99. (Currently Amended) A method for locating mobile stations at one or more unknown terrestrial locations using wireless signal measurements obtained from transmissions between said mobile stations and a plurality of fixed location terrestrial communication stations, wherein each of said communications stations includes one or more of a transmitter and a receiver for wirelessly communicating with said mobile stations, comprising:

receiving, from a plurality of location requesting sources, a plurality of input requests for locations of the mobile stations;

for each of the input requests, providing to one or more mobile station location determining sources one or more location requests for location information related to a location of one of said mobile stations;

wherein said one or more location determining sources perform at least two of the following techniques (i), (ii), (iii) and (iv):

(i) a first technique for determining location information of said mobile stations, wherein for at least some geographical location of some mobile station M1 of the mobile stations, the first technique outputs first data providing geographical information for locating M1 using a signal time delay value dependent upon a first input obtained from a signal, S_1, received at the mobile station M1 from a satellite, wherein said first technique uses said signal time delay value for determining at least one distance between said mobile station M1 and the satellite;

(ii) a second technique for determining location information for said mobile stations, wherein for some mobile station M2 of the mobile stations, the second technique outputs second data providing geographical information for locating M2 by recognizing a pattern of characteristics of a second input obtained from wireless communications between M2

and the communication stations, wherein said pattern recognition is dependent upon an association that associates, for each location L of a plurality of mobile station locations, wireless signal characteristics between: (a) one or more of the communication stations, and (b) one of the mobile stations at the location L;

(iii) a third technique for determining location information for said mobile stations, wherein for at least some geographical location of some mobile station M3 of the mobile stations, and for at least a corresponding one of the communication stations CS that is responsive to transmissions from the mobile station M3, the third technique in response to a third input, outputs third data providing geographical information for locating M3 using one of (a) and (b) following:

(a) a distance between the communication station CS and the mobile station M3, said distance dependent upon measurements of a time delay of signals transmitted between the mobile station M3 and the communication station CS, said measurements of a time delay obtained from the third input, wherein for determining the distance, two way communication between the mobile station M3 and the communication station CS is used, and

(b) a direction of M3 from CS, wherein the third input includes a measurement of a wireless signal angle of arrival between the mobile station M3 and the communication station **CS**, the measurement indicative of an angular orientation about the communication station CS of a direction of the wireless transmissions to CS from M3, wherein the direction of M3 from CS is determined using the measurement; and

(iv) a fourth technique for determining information for likely locations of the mobile stations, wherein for each mobile station M4 of at least some of the mobile stations, the fourth technique outputs fourth data providing geographical information for locating M4, wherein (c) - (e) following hold:

(c) the fourth technique is dependent upon signal data of a fourth input, wherein the signal data is obtained from wireless signal information communicated between the mobile station M4 and the communication stations,

(d) the fourth technique is dependent upon (d1) and (d2) following: (d1) a representation of each of a plurality of geographical locations, and (d2) for each location, L_d, of the geographical locations, corresponding collected signal information previously obtained using transmissions between some one of the

mobile stations and the communication stations, when the some one mobile station transmitted from approximately the geographical location L_d, and

(e) the fourth technique determines one or more of the geographical location representations that are likely to be approximate to at least one unknown location of the mobile station M4;

first obtaining, in response to a first of the location requests received from a first of the requesting sources, at least first location information, **FLI**, of a first location of a first of said mobile stations, said first location information **FLI** is determined using at least said first data from an instance of said first technique;

first determining, using said first location information **FLI**, first output location data according to a first output criteria for a corresponding destination for the first request, said first output location data including a representation identifying a first geographical indication of the first location;

second obtaining, in response to a second of the location requests received from a second of the requesting sources, at least second location information, **SLI**, of a second location of a second of said mobile stations, said second location information **SLI** dependent upon an instance of one or more of: (1) said third data wherein the second mobile station is an occurrence of M3, and (2) one of said second or fourth data, wherein the second mobile station is a respective occurrence of the corresponding one of the mobile stations M2, and M4;

second determining, using said second location information **SLI**, second output location data according to a second output criteria for a corresponding destination for the second request, said second output location data including a representation identifying a second geographical indication of the second location;

wherein for at least one of said first and second output criteria there is an output criteria for another of the location requests that is different from said at least one output criteria;

first transmitting said first output location data to its corresponding destination via a communications network; and

second transmitting said second output location data to its corresponding destination via a communications network.

Claims 100 was previously cancelled.

Claim 101 was previously cancelled.

Claim 102 was previously cancelled.

Claim 103 was previously cancelled.

Claim 104 was previously cancelled.

Claim 105 was previously cancelled.

Please amend Claim 106 as follows:

106. (Currently Amended) A location system for locating mobile stations using wireless signal data obtained from transmissions between said mobile stations and a network of fixed location communication stations, wherein said communication stations are cooperatively linked for use in locating said mobile stations, comprising:

an archive for storing a plurality of data collections, wherein for each of a plurality geographical locations, there is one of said data collections having (a1) and (a2) following:

(a1) a representation of the geographical location, and

(a2) a set of said wireless signal data obtained using transmissions between one of said mobile stations and the network, wherein the one mobile station transmits from approximately the geographical location of (a1);

an interface for communicating with a plurality of location estimators, one or more of which are included in the category (b1) following, and one or more of said location estimators are included in the category (b2) following:

(b1) a first category of adaptable location estimators, wherein each said adaptable location estimator generates a geographical location estimate[[s]] for each mobile station ($\mathbf{M_{b1}}$) of a plurality of said mobile stations when said adaptable location estimator receives first corresponding input values obtained from transmissions between said mobile station $\mathbf{M_{b1}}$ and a plurality of the communication stations, and wherein each said adaptable location estimator adapts its generated geographical location estimates according to changes in said data collections of said archive;

(b2) said second category of location estimators, wherein each said location estimator of said second category determines a location for each mobile station ($\mathbf{M_{b2}}$) of a plurality of said mobile stations by using second corresponding input values obtained from wireless signals, S, received by $\mathbf{M_{b2}}$, or another of said mobile stations, from a plurality of non-terrestrial transmitting stations above and not supported on the Earth's surface, wherein said wireless signals S provide time values for determining a spatial range between: (i) $\mathbf{M_{b2}}$ or the another mobile station, and (ii) each of at least two of the non-terrestrial stations, wherein the spatial ranges are determined from transmission times for each of

the wireless signals transmitted by the at least two of the non-terrestrial transmitting stations;

a location estimator selector for selecting one or more of said plurality of location estimators for generating mobile station location estimates;

wherein for locating one of said mobile stations, **M**, said location estimator selector selects one or more of: one of said adaptable location estimators, and one of said location estimators of said second category according to whether said first corresponding input values are available for **M** being an instance of $\mathbf{M_{b1}}$, or said second corresponding input values are available for **M** being an instance of $\mathbf{M_{b2}}$.

107. (Previously Presented) The location system of Claim 106, further including a combiner location estimator for determining a resulting location estimate of said mobile station **M** by combining a plurality of location estimates from the selected one or more location estimators.

Claims 108 and 109 were previously cancelled.

110. (Previously Presented) The location system as claimed in Claim 107, wherein at least a first of said adaptable location estimators includes a first artificial neural network, and said first artificial neural network is one of: a multilayer perceptron, an adaptive resonance theory model, and radial basis function network.

Claims 111 and 112 were previously cancelled.

113. (Previously Presented) A location system for locating a wireless mobile station that is capable of communicating with a plurality of networked communication stations, comprising:

a transceiver: (a) for at least detecting a direction of wireless signals transmitted from the mobile station, and (b) for communicating with said networked communication stations information related to a location of said wireless mobile station;

a signal analyzer for determining whether a detected wireless signal from said mobile station has been one of: reflected and deflected;

one or more location estimators for providing one or more location estimates of said mobile station by using wireless signals transmitted from said mobile station, wherein at least one of said location estimators utilizes the signals from said mobile station; and

a transport for moving at least said transceiver when locating said wireless mobile station.

114. (Previously Presented) The location system as claimed in Claim 113, wherein said signal analyzer includes a comparator for comparing: (a) a distance of said mobile station from said transceiver using a signal strength of said wireless signals from said mobile station, with (b) a distance of said mobile station from said transceiver using a signal time delay measurement of wireless signal from said mobile station.

115. (Previously Presented) The location system as claimed in Claim 113, further including one or more transceiver location estimators for estimating a location of said transceiver, wherein at least one of said transceiver location estimators uses data from wireless signals communicated between: (i) said transport, and (ii) one of: said networked communication stations and a global positioning satellite.

116. (Previously Presented) The location system as claimed in Claim 115, further including a deadreckoning component operatively movable with movements of said transport for estimating a change in a location of said transceiver, wherein said deadreckoning component determines incremental updates to at least one location estimate of said transport output by at least one of said transceiver location estimators.

Claim 117 was previously cancelled.
Please amend claim 118 as follows:

118. (Currently Amended) A method for locating a wireless mobile station, comprising:

repeatedly performing the following steps (A1) through (A3) for locating the mobile station, wherein there is at least a first and a second mobile station location technique, each of the location techniques able to provide corresponding location information of a location of the mobile station at some time during said step of repeatedly performing;

(A1) receiving the corresponding location information of the mobile station from at least one of the first and a second mobile station location techniques, wherein:

(a) said first location technique determines a first location information of the mobile station when supplied with first data, wherein said first data includes timing values obtained from wireless timing signals received by the mobile station from one or more satellites, wherein the first location technique determines the first location information using information indicative of a distance between the mobile station and at least one of the one or more satellites; and

(b) said second location technique determines a second location information of the mobile station when supplied with second data, wherein said second location

technique uses values from said second data that are obtained using time delays of wireless signals transmitted between the mobile station and a plurality of terrestrial transceivers cooperatively linked together for use in two way communication with the mobile station, wherein the second location technique determines the second location information by determining at least one of (i) and (ii) following: (i) a representation of a locus of locations having substantially a same time difference of arrival for wireless signals communicated between: the mobile station, and each of at least two of the transceivers, and (ii) an area by a correspondence between surveyed wireless signaling characteristics of the area and wireless signals communicated between the mobile station and the transceivers;

(A2) determining at least one resulting location information of said mobile station using at least one of: (a) a first value obtained from an instance of the first location information received from said first location technique, and (b) a second value obtained from an instance of the second location information received from said second location technique;

(A3) outputting said resulting location information for display on a display device, wherein said resulting location information is displayed as at least one location of the mobile station on a map;

wherein: (1) an estimate of a first location of the mobile station is included in an instance of said first location information obtained from an instance of the first data for substantially the first location, and (2) an estimate of a second location of the mobile station is included in an instance of said second location information obtained from an instance of the second data for substantially the second location; and

wherein for at least one location of the mobile station one of: (3) said first location technique includes a step of using wireless signals, **S**, between the ~~first~~ mobile station and at least one terrestrial transceiver to improve a performance of said first location information, and (4) said second location technique determines an area by a correspondence between surveyed wireless signaling characteristics of the area according to (A1)(b)(ii).

Please amend claim 119 as follows:

119. (Currently Amended) A method for locating a plurality of wireless mobile stations, wherein for each of the wireless mobile stations, **M**, measurements of wireless signals are used such that at least one of:

(i) said measurements, and

(ii) said wireless signals,

is transmitted between said mobile station **M** and at least one of a plurality of fixed location communication stations, each communication station capable of at least one of receiving wireless signals from, and transmitting wireless signals to said mobile station **M**, comprising:

receiving, from each of at least first and second mobile station location estimators, corresponding first and second information related to geographical approximations for a location of a mobile station ($\mathbf{M_1}$) of the mobile stations, wherein:

(a) for determining a likely geographical approximation, GA_A, for a location, L_A, of a second of the mobile stations ($\mathbf{M_2}$) at a time T_A, said first location estimator generates GA_A without requiring a prior likely geographical location approximation generated by said second location estimator for locating $\mathbf{M_2}$ at substantially the location L_A at substantially the time T_A, and,

(b) for estimating a likely geographical approximation, GA_B, for a location, L_B, of a third one of the mobile stations ($\mathbf{M_3}$) at a time T_B, said second location estimator generates GA_B without requiring a prior likely geographical location approximation generated by said first location estimator for locating $\mathbf{M_3}$ at the location L_B at substantially the time T_B;

wherein each of said first and second mobile station location estimators activates or receives an output from at least one of the techniques (A1) through (A5) following:

(A1) one or more coverage area analysis techniques for locating an instance $\mathbf{I_1}$ of one of the plurality of mobile stations when supplied with first data obtained from wireless signal measurements communicated between $\mathbf{I_1}$ and one or more of said plurality of the communication stations,

wherein each said coverage area analysis technique obtains, when activated for $\mathbf{I_1}$, at least one location estimate of $\mathbf{I_1}$ that is indicative of a wireless coverage area of one of said communication stations;

(A2) a second technique, wherein said second technique estimates a location of an instance $\mathbf{I_2}$ of one of the plurality of mobile stations, wherein when supplied with second data obtained from wireless signal measurements communicated between $\mathbf{I_2}$ and one or more of said plurality of communication stations, said second technique determines a correspondence between (1) and (2) following: (1) at least one a first value derived

from said second data, and (2) wireless survey data (D) wherein D is obtained using second values, wherein for each second value, it is derived from mobile station wireless signal measurements at a known geographical location;

(A3) a locus computing technique for estimating a location of an instance $\mathbf{I_3}$ of one of the plurality of mobile stations when supplied with third data obtained from wireless signal measurements communicated between $\mathbf{I_3}$ and two or more of said plurality of communication stations, wherein said locus computing technique utilizes measurements (S) of wireless signals from said third data for determining at least one locus of locations for $\mathbf{I_3}$,

wherein at least one of said measurements S is obtained using a signal time delay between $\mathbf{I_3}$ and at least one of the two or more communication stations; wherein there is two way wireless communication between $\mathbf{I_3}$ and at least one of the at least one communication station,

(A4) a direction of arrival technique for estimating a location of an instance $\mathbf{I_4}$ of one of the plurality of mobile stations when supplied with fourth data obtained from wireless signal measurements communicated between $\mathbf{I_4}$ and one of said communication stations (CS_4), wherein said direction of arrival technique determines a location estimate of $\mathbf{I_4}$ using, from the fourth data, a direction from which wireless signals arrive at CS_4 from $\mathbf{I_4}$,

wherein said fourth data is indicative of a signal direction having a resolution substantially less than 60 degrees;

(A5) a signal processing technique for estimating a location of an instance $\mathbf{I_5}$ of one of the plurality of mobile stations when supplied with fifth data obtained from wireless signals received by $\mathbf{I_5}$ from one or more transmitting stations above and not supported on the earth's surface, wherein said wireless signals provide time values, and said signal processing technique determines at least one differential between a time of transmission and a time of arrival for the wireless signals transmitted by a plurality of the transmitting stations;

wherein for at least some mobile station $\mathbf{M_k}$ of the mobile stations, at least said first location estimator activates or receives an output from an instance of said technique of (A5) for locating $\mathbf{M_k}$;

determining a resulting location estimate of said mobile station $\mathbf{M_1}$[[,]];

wherein said step of determining includes at least one of the substeps (B1) through (B3) following:

(B1) when said first and second information include, respectively, first and second likely geographical approximations, combining said first and second likely geographical approximations so that said resulting location estimate is dependent on each of said first and second location likely geographical approximations;

(B2) obtaining one or more rating values for rating said first and second information, wherein said rating values are indicative of relative expected performances of said first and second location estimators in locating said one mobile station; and

(B3) selecting one of said first and second information for receiving preference in determining said resulting location.

120. (Previously Presented) The method of Claim 119, wherein said mobile station $\mathbf{M_1}$ is part of a mobile base station.

121. (Previously Presented) A method for locating a terrestrial wireless mobile station capable of wireless two way communication with a plurality of fixed location terrestrial stations, comprising:

receiving, over time from a plurality of mobile station location techniques, a plurality of instances of location information having one or more location estimates of the mobile station, wherein said location techniques generate the instances of location information when said location techniques are supplied with corresponding input information upon which their location information is dependent, and wherein the corresponding input information is at least partially derived from measurements of wireless signals transmitted from or received at the mobile station;

wherein said step of receiving includes steps (a) and (b) following:

(a) first receiving, from a first of said location techniques, first location information for the mobile station, wherein said corresponding input information for said first location technique includes timing data from wireless signals transmitted from one or more global positioning satellites, and received by the mobile station, wherein said first location technique also uses information dependent upon a location of a terrestrial receiver, TS, that receives wireless transmissions from the mobile station, and resulting in the first location information being dependent on the location of TS and the timing data, wherein TS is remote from the mobile station;

(b) second receiving, from a second of said location techniques, second location information for the mobile station, wherein said corresponding input information for said second location technique includes data that is a function of a signal time delay of wireless signals transmitted between the wireless mobile station and one of said plurality of fixed location terrestrial stations during a plurality of transmissions between the mobile station and the one terrestrial station;

wherein for obtaining the corresponding input information for the second location technique, there is at least one transmission from the mobile station to the one terrestrial station, and at least one transmission from the one terrestrial station to the mobiles station, and wherein said second location information is determined by said second location technique at a terrestrial site whose location is independent of a movement of the mobile station;

determining, a plurality of consecutive resulting location estimates for tracking the mobile station, wherein said step of determining includes steps (c) and (d) following:

(c) obtaining, for at least one time during the tracking, a corresponding first one of said resulting location estimates of the mobile station using an instance ($\mathbf{I_1}$) of said first location information for locating the mobile station; and

(d) obtaining, for at least one time during the tracking, a corresponding second one of said resulting location estimates of the mobile station using an instance ($\mathbf{I_2}$) of said second location information for locating the mobile station.

122. (Previously Presented) The method as claimed in Claim 121, wherein said step of determining includes:

establishing a priority between a location estimate of said instance $\mathbf{I_1}$ of the first location information, and a location estimate of said instance $\mathbf{I_2}$ of the second location information.

Please amend claim 123 as follows:

123. (Currently Amended) The method as claimed in Claim 122, wherein said step of establishing a priority includes obtaining a confidence value for one or more of: (a) ~~at least one of~~ said ~~first~~ location estimate[[s]] for said instance $\mathbf{I_1}$ of the first location information; and (b) ~~at least one of~~ said ~~second~~ location estimate[[s]] for said instance $\mathbf{I_2}$ of the second location information;

wherein each said confidence value is indicative of a likelihood of the mobile station having a location represented by said corresponding location estimate for the confidence value.

124. (Previously Presented) The method as claimed in Claim 121, wherein said step of determining includes preferring a location estimate of said instance $\mathbf{I_1}$ of the first location information over a location estimate of said instance $\mathbf{I_2}$ of the second location information when both are available for substantially a same location of the mobile station.

125. (Previously Presented) The method as claimed in Claim 121, wherein said step of determining includes, for at least one of said resulting location estimates, determining one or more of: (a) a velocity of the mobile station, (b) an acceleration of the mobile station, and (c) one or more geographical features near said at least one resulting location estimate.

126. (Previously Presented) A method for providing a location estimate of a wireless mobile station using measurements of wireless signals, comprising:

first providing, when available, a first collection of measurements of wireless signals transmitted between said mobile station and one or more satellites, to a first location technique;

second providing, to a second location technique remote from and independent of a movement of the mobile station, a second collection of measurements obtained from wireless signals transmitted between said mobile station and one or more fixed location terrestrial stations, at least when said first collection is not available, wherein said second collection includes signal time delay data of wireless signals transmitted between the mobile station and the fixed location terrestrial stations;

wherein said second location technique determines a location estimate of the mobile station by determining a locus of locations from at least one of the fixed location terrestrial stations, wherein for locations identified by said locus of locations, a signal time delay dependent condition is satisfied using the signal time delay data;

first obtaining first location information of said mobile station when said first location technique is supplied with an instance of said first collection;

second obtaining second location information of said mobile station when said second location technique is supplied with an instance of said second collection;

accessing at least one value related to a quality of at least one of said first location information and said second location information; and

outputting, to a source requesting location data for said mobile station, resulting location information that is dependent upon: at least one of said first and second location information, and dependent upon said at least one value.

127. (Previously Presented) The method as claimed in Claim 126, further including receiving a signal from the mobile station for determining a location of the mobile station.

128. (Previously Presented) The method of Claim 126, wherein said step of outputting includes some of:

(a) sending said resulting location through a communications network to a known destination;
(b) preferring one of said first and second location information over the other when both are available for locating the mobile station;
(c) combining said first and second location information when both are available for locating the mobile station at substantially a same time.

129. (Previously Presented) The method of Claim 126, wherein said signal time delay dependent condition includes obtaining one of a time of arrival and a time difference of arrival related to wireless signals transmitted between the mobile station and the at least one of the fixed location terrestrial stations.

130. (Previously Presented) The method of Claim 126, wherein at least one of said steps of first and second providing includes transmitting one of said first and second collections on at least a portion of the Internet.

Please amend Claim 131 as follows:

131. (Currently Amended) A method for locating a mobile station **(M)** using wireless signal measurements obtained from transmissions between said mobile station **M** and a plurality of fixed location communication stations, wherein each of said communications stations includes one or more of a transmitter and a receiver for wirelessly communicating with said mobile station **M**, comprising:

(1) providing access to first and second mobile station location evaluators, wherein said location evaluators are able to determine information related to one or more location estimates of said mobile station **M** when said location evaluators are supplied with data ~~having values~~ obtained from wireless

signal measurements obtained via transmissions between said mobile station **M** and the communication stations;

wherein (A) and (B) following hold:

(A) said first location evaluator performs one or more of the following techniques (i), (ii) and (iii) when supplied with corresponding instances of said data, and wherein for at least one geographical location instance of the mobile station **M**, ~~denoted $\mathbf{M_k}$,~~ said at least one geographical location instance ~~being~~ is located according to the steps (1) through (4) herein, and wherein said first location evaluator determines a geographical location indication for [[$\mathbf{M_k}$]] **M** using a delay time of a signal from at least one satellite to [[$\mathbf{M_k}$]] **M** for determining a spatial range between [[$\mathbf{M_k}$]] **M** and the at least one satellite;

the above cited techniques are ~~include~~:

(i) a first technique for determining one of: (a) for at least one of the communication stations a wireless signal angle of arrival using a measurement of a wireless signal angle of arrival of wireless signals transmitted between the mobile station and one of the communication stations, and (b) for at least two of the communication stations, a time difference of arrival of wireless signals between the mobile station and the at least two communication stations from which for at least one of the two communication stations there is two way communications with the mobile station, wherein the two way communication uses a wireless communication protocol;

(ii) a second technique for estimating a location of said mobile station, using values from a corresponding instance of said data obtained from signals received at the mobile station from one or more satellites; and

(iii) a third technique for identifying a pattern of characteristics of a corresponding instance of said data, wherein said pattern of characteristics is indicative of a plurality of wireless signal transmission paths between the mobile station and each of a plurality of signal receivers, wherein said signal receivers are included in one or more of the communication stations; and

(B) for the one or more of said techniques performed by said first location evaluator, said second location evaluator performs a particular combination of one or more of said techniques (i) through (iii) that yields a different result when supplied with corresponding instances of said data for the one or more techniques of said particular combination;

(2) first obtaining, from said first location evaluator, first location related information for identifying a location of the mobile station **M** for at least one of the following situations: a tracking of the mobile station **M**, and in response to a request for a location of the mobile station **M**, wherein said first location

evaluator uses one or more available first corresponding instances of said data for said one or more techniques performed by said first location evaluator;

(3) second obtaining, from said second location evaluator, second location related information for identifying a location of the mobile station **M** for said same at least one situation wherein said second location evaluator uses one or more available second corresponding instances of said data for said particular combination of said techniques;

(4) determining a resulting location information of the mobile station **M** dependent upon at least one of: (a) a first value obtained from said first location related information, and (b) a second value obtained from said second location related information, wherein said resulting location information is determined using, or includes, at least one of:

(4-i) a value indicative of a likelihood of the mobile station **M** being at a location represented by said resulting location information; and

(4-ii) data identifying one or more geographical extents associated with a location estimate (L) of the mobile station **M**, and wherein the one or more geographical extents provide additional location information not provided by the first and second location related information.

Please amend Claim 132 as follows:

132. (Currently Amended) The method as claimed in Claim 131, wherein said mobile station **M** is one of: (1) co-located with a process that activates at least one of said location evaluators; and (2) includes a process that activates at least one of said location evaluators.

Please amend Claim 133 as follows:

133. (Currently Amended) A method for locating a mobile station when there is an occurrence of at least one of: said mobile station being tracked, and a request for locating said mobile station, wherein said method uses wireless signal measurements obtained from transmissions between said mobile station and a plurality of fixed location communication stations, wherein each of said communication stations includes one or more of a transmitter and a receiver for wirelessly communicating with said mobile station, comprising:

providing communication to first and second mobile station location evaluators, wherein said location evaluators determine information related to one or more location estimates of said mobile station when said location evaluators are supplied with data ~~having values~~ obtained using wireless signals, wherein (A) and (B) following:

(A) said first location evaluator performs one or more of the following techniques (i), (ii) and (iii) when supplied with corresponding instances of said data:

(i) a first technique for estimating a location of said mobile station by using a wireless signal angle of arrival between the mobile station and at least one of the communication stations CS, wherein the wireless signal angle of arrival identifies a direction for the mobile station from CS;

(ii) a second technique for estimating a location of said mobile station using values from a corresponding instance of said data obtained from timing signals received at the mobile station from one or more satellites;

(iii) a third technique, wherein said third technique uses a statistical correlation for correlating (a) and (b) following:

(a) wireless signal related values of one of said corresponding instance of said data; and

(b) data, D, wherein for each location L of a plurality of locations, said data D includes one or more wireless signal measurements related to a wireless communication between some mobile station that is substantially at L, and at least one of the communication stations;

wherein said correlation is used for determining a likely geographical estimate, GR, for a location for the mobile station and data indicative of a probability that the mobile station is within the likely geographical estimate GR; and

(B) for said one or more of said techniques performed by said first location evaluator, said second location evaluator performs a ~~combination~~ set of one or more of said techniques, when said second location evaluator is supplied with corresponding instances of data for the one or more techniques of said ~~combination~~ set, for providing mobile station location related information: (1) in addition to the location related information from said first location evaluator, or (2) as an alternative to said first location evaluator;

wherein for locating the mobile station, at least one of said first and second location evaluators performs said second technique for determining a geographical location indication for the mobile station using a delay time of a signal from at least one of the satellites to the mobile station for determining a spatial range between said mobile station and the at least one satellite;

first obtaining from said first location evaluator, first location related information of the mobile station's location for said occurrence using~~, when~~ from an available~~, first~~ corresponding instance[[s]] of said data for each of said one or more said techniques performed by said first location evaluator;

second obtaining from said second location evaluator, second location related information of the mobile station's location for said occurrence using~~, when~~ from an available~~, second~~ corresponding instance[[s]] of said data for said one or more said techniques of the set ~~different combination~~;

wherein for each location evaluator (LE) of said first and second location evaluators, LE does not receive the first or second location related information from the other of the first and second location evaluators for improving the corresponding first or second location related information obtained from LE;

determining a resulting location estimate of the mobile station using at least one of (c) and (d) following: (c) a first value obtained from said first location related information, and (d) a second value obtained from said second location related information.

Please amend Claim 134 as follows:

134. (Currently Amended) A method for locating one or more mobile stations using wireless signal measurements obtained from transmissions between said mobile stations and a plurality of terrestrial communication stations, wherein each of said communication stations includes one or more of a transmitter and a receiver for wirelessly communicating with said mobile stations, comprising:

receiving a location request for a location of a first of the mobile stations, wherein the first mobile station is capable of providing wireless telephony transmissions, and a substantially same collection of components are in electronic contact with one another for performing each of at least most wireless telephony transmissions from the first mobile station;

generating one or more messages[[,]] for information related to a location of said first mobile station, said messages for requesting activation of one or more mobile station location estimators such that as a result of said location estimators being supplied with corresponding input data having values obtained from wireless signal measurements, said one or more location estimators perform at least two of the following techniques (i), (ii), (iii) and (iv):

(i) a first technique for determining, as a result, at least one location estimate or locus for said first mobile station by using an instance of said corresponding input data having timing measurements indicative of one of: a time of arrival of wireless signals, and a time difference of arrival of wireless signals between the first mobile station and at least one of the communication[[s]] station<u>s</u> CS<u>1</u> for determining a range of the first mobile station from CS<u>1</u>, said range varying with varying values of the timing measurements, wherein the signals for obtaining the timing measurements are communicated during wireless signal transmissions between the first mobile station and CS<u>1</u>, with at least one of the transmissions being from the first mobile station to CS<u>1</u>, and wherein said first technique outputs the result from a site different from the location of the first mobile station;

(ii) a second technique for determining one or more candidate locations of the first mobile station, wherein each of said candidate locations is determined using, for at least some one of the communication stations CS2, an instance of said corresponding input data for a wireless signal direction of arrival that is an angular orientation about the communication station CS2 of a direction of the first mobile station determined using a measurement of a wireless signal angle of arrival of wireless signals transmitted between the first mobile station and the communication station CS2;

wherein for at least one occurrence when both said first and second techniques are used for locating the first mobile station at substantially a same location L, (1) and (2) following:

(1) at least one of said candidate locations is substantially unaffected by each said result obtained from every instance of said first technique performed by said location estimators for locating the first mobile station substantially at L, and

(2) at least one result from an instance of said first technique is substantially unaffected by each of said candidate locations for locating the first mobile station substantially at L;

(iii) a third technique for determining location information for said first mobile station, using timing values from an instance I_S of said corresponding input data obtained from signals received at the first mobile station from a plurality of satellites, and wherein said ~~corresponding input data~~ instance I_S also includes additional data for improving on location information for the first mobile station obtained from said satellite signals, wherein said additional data is received by the first mobile station in a wireless communication between: said first mobile station, and a communication station of a collection of one or more of the plurality of terrestrial communication stations[[,]];

wherein each communication station of said collection is one of: (A) a fixed location base station of a commercial mobile radio service provider, and (B) operable for providing a wireless communication for responding to a telephony emergency call placed with the commercial mobile radio service provider;

(iv) a fourth technique, wherein said fourth technique determines a location estimate from a pattern of wireless signal characteristics between: (a) one or more of the communication stations, and (b) said first mobile station;

wherein said fourth technique performs ~~includes the steps of~~ (c) and (d) following:

(c) accessing information obtained via an association that associates, for each geographical location (L) of a plurality of geographical locations, (c1) and (c2) following:

(c1) a representation of the geographical location L, and

(c2) for the geographical location L, corresponding signal information indicative of at least one characteristic of a signal S previously transmitted between some mobile station, $\mathbf{M_L}$, and one or more of the communication stations, when the some mobile station $\mathbf{M_L}$ transmitted **S** from approximately the geographical location L;

wherein for at least most of said geographical locations L, $\mathbf{M_L}$ is different from the first mobile station;

(d) determining one or more likely location estimates for the first mobile station from a similarity between (d1) and (d2) following:

(d1) data for one or more signal characteristics determined from wireless signals communicated between the first mobile station and the communication stations, wherein said signal characteristics include at least a first measurement of a ~~first~~ non-line of sight signal transmission between the first mobile station and one of the communication stations, and

(d2) a portion of the accessed information that is indicative of the signal information of (c2);

first obtaining, from said one or more location estimators, first mobile station related location information obtained as a result of at least two instances of said corresponding input data being used by their corresponding techniques of said first, second, third and fourth techniques, wherein one of the two instances of said corresponding input data is used by said third technique;

determining a resulting location estimate of the first mobile station obtained from said first mobile station related location information;

wherein at least one of said steps of receiving, generating, first obtaining, and determining includes a substep of one of: (i) transmitting information to a destination via a communication network, and (ii) receiving information from a source via a communication network.

135. (Previously Presented) The method of Claim 134, further including a step of outputting said resulting location estimate to a location identified by said location request.

Claim 136 was previously cancelled.

Please amend claim 137 as follows:

137. (Currently Amended) A method for locating a mobile station **M** when there is at least one occurrence of:

(1) said mobile station **M** being tracked, and

(2) a request for locating said mobile station **M**,

wherein said method uses wireless signal measurements obtained from transmissions between said mobile station **M** and a plurality of fixed location communication stations, wherein each of said communication**[[**s**]]** stations includes one or more of a transmitter and a receiver for wirelessly communicating with said mobile station **M**;

wherein first and second mobile station location evaluators are available, wherein each of said location evaluators determine location related information for locating said mobile station **M** as a result of said location evaluator being supplied with data having values obtained from wireless signal measurements, wherein (A) and (B) following hold:

(A) said first location evaluator performs one or more of the following techniques (i), (ii), (iii) and (iv) as a result of said techniques being supplied with a corresponding instance of said data:

(i) a first technique for determining a first resulting data related to a location of the mobile station **M** from a first corresponding instance of said data, the first corresponding instance of said data dependent upon a two way communication between the mobile station **M** and at least one of the communication stations CS,

wherein one of: a wireless signal angle of arrival, and a time difference of arrival between the mobile station **M** and the at least one of the communication stations CS from the first corresponding instance of said data is used for determining said first resulting data;

(ii) a second technique for determining a second resulting data related to a location of the mobile station **M**, using timing values from a second corresponding instance of said data obtained from signals received at the mobile station **M** from one or more satellites;

(iii) a third technique for determining a third resulting data related to a location of the mobile station **M** by recognizing signal characteristics from a third corresponding instance of said data, wherein said third technique includes the steps of (a) and (b) following:

(a) accessing information obtained from an association that associates, for each geographical location (L) of a plurality of geographical locations, (a1) and (a2) following:

(a1) a representation of the geographical location L, and

(a2) for the geographical location L, corresponding signal information indicative of at least one characteristic of a signal S previously transmitted between some mobile station, M_L, and one or more of the communication stations, when the some mobile station M_L transmitted S from approximately the geographical location L;

wherein for at least most of said geographical locations L, M_L is different from the mobile station **M**;

(b) determining one or more likely location estimates for the mobile station **M** from a similarity between (b1) and (b2) following:

(b1) the third corresponding instance of said data, the third corresponding ~~conrresponding~~ instance including values for one or more signal characteristics determined from wireless signals communicated between the mobile station **M** and the communication stations, wherein said signal characteristics include at least a first measurement of a ~~first~~ non-line of sight signal transmission between the mobile station **M** and one of the communication stations, and

(b2) a portion of the accessed information that is indicative of the signal information of (a2); and

(iv) a fourth technique for determining a fourth resulting data related to a location of the mobile station **M**, wherein said fourth technique statistically determines an expected location of the mobile station M by correlating (c) and (d) following:

(c) wireless signal related values obtained from a fourth corresponding instance of said data, and

(d) data, D, wherein for each location L of a plurality of locations, said data D includes one or more wireless signal measurements related to a wireless communication between some mobile station different from the mobile station **M** when the different mobile station is substantially at L,

wherein said correlation is used for determining a likely geographical indication, GR, for a location for the mobile station **M**; and

(B) for said one or more of said techniques performed by said first location evaluator, said second location evaluator performs a different combination of one or more of said first, second, third and fourth techniques when supplied with corresponding instances of said data for the one or more techniques of said different combination of techniques;

comprising:

first obtaining, from said first location evaluator, first location related information, for said at least one occurrence of **M**, as a result of one or more of the first, second, third and fourth corresponding instances of data being used by their respective one or more of the techniques performed by the first location evaluator;

second obtaining, from said second location evaluator, second location related information, for said at least one occurrence of **M**, as a result of one or more of the first, second, third and fourth corresponding instances being used by their respective said one or more of the techniques performed by second location evaluator;

wherein for locating the mobile station **M**, at least one of said first and second location evaluators determines a corresponding one of said first and second location related information using said second resulting data;

wherein for at least one substantially same location of the mobile station **M**, each of said first and second location related information is obtained; and

determining a resulting location estimate of the mobile station **M** dependent upon at least one of: (a) a first value obtained from said first location related information, and (b) a second value obtained from said second location related information.

138. (Previously Presented) The method of Claim 137, wherein one or more of:

(a) said first technique includes a step of performing one of a triangulation and a trilateration;

(b) said third technique includes a step of activating an artificial neural network; and

(c) said fourth technique includes a step of performing one of: a principle decomposition analysis, a least squares analysis, and a partial least squares analysis; and

(d) the first resulting data is dependent on a representation of a locus of locations for **M** from at least one of the fixed location terrestrial stations.

Claim 139 was previously cancelled.

140. (Previously Presented) A method for locating a mobile station using wireless signal measurements obtained from transmissions between said mobile station and at least one of a plurality of terrestrial transceivers capable of wirelessly detecting said mobile station, comprising:

providing access to at least two of the location techniques (a) through (c) following:

(a) a first technique for triangulating or trilaterating a location of the mobile station, wherein for each transceiver T of three or more of the transceivers, one of: a signal time of arrival, and a signal time difference of arrival between the mobile station and the transceiver T is determined using a first input obtained from the wireless signal measurements,

wherein for at least one of the three or more transceivers T_0, the signals for obtaining the wireless signal measurements are received at the transceiver T_0 during a plurality of wireless signal transmissions between the mobile station and the transceiver T_0, with at least one of the transmissions being from the mobile station to the transceiver T_0, and at least one of the transmissions being from the transceiver T_0 to the mobile station;

(b) a second technique using a second input obtained from one or more transmissions between the mobile station and the transceivers, said second input including time delay measurements of signals received at the mobile station from one or more satellites;

(c) a third technique that determines a location of the mobile station by using a plurality of pairs of (i) and (ii) following:

(i) characteristics of wireless signals communicated between some mobile station and one or more of the transceivers, and

(ii) a location of said some mobile station during the communication,

wherein when said third technique is supplied with a third input of characteristics of wireless signals communicated between said mobile station and one or more of the transceivers, data indicative of a location of the mobile station is obtained from a similarity between the third input and the characteristics of wireless signals of (c)(i);

determining whether at least said second technique has its corresponding input available for determining a first location estimate of said mobile station;

determining a second location estimate of said mobile station by activating an accessible one of said location techniques different from said second technique when the corresponding input for said different technique is available;

receiving at least one of said first and second location estimates;

obtaining resulting location information for transmitting on a communications network, wherein said resulting location information is obtained using at least one of said first location estimate and said second location estimate;

wherein when said mobile station is at a first location, an instance of at least said first location estimate is used in said obtaining step for obtaining a first corresponding instance of said resulting location information, and when said mobile station is at a second location, an instance of at least said second location estimate is used in said obtaining step for obtaining a second corresponding instance of said resulting location information; and

wherein for at least one of the first and the second locations, said obtaining step includes one of: (1) a step of improving upon said instance of at least said first location estimate, and (2) a step of providing information indicative of an accuracy of said first corresponding instance of said resulting location information.

141. (Previously Presented) The method as claimed in Claim 140, wherein at least two of said location techniques generate location estimates of said mobile station wherein neither of said at least two location techniques depend upon the other one for their corresponding input to be available.

Please amend claim 142 as follows:

142. (Currently Amended) A method for locating a mobile station, **M**, of a plurality of mobile stations using wireless signal measurements obtained from transmissions between the mobile station **M** and at least one of a plurality of communication stations, wherein each of said communication[[s]] stations includes one or more of a transmitter and a receiver for wirelessly communicating with each of the mobile stations, comprising:

providing access to at least first and second location estimators for estimating a location of the mobile station **M**, wherein for said first location estimator to estimate a location of the mobile station **M**, said first estimator is dependent upon a result from a first location technique that uses a first set of one or more of the following (a) through (e) location technique categories and no other of the following (a) through (e) location technique categories, and for said second location estimator to estimate a location of the mobile station **M**, said second estimator is at least one of (A) and (B) following: (A) dependent upon a result from a second location technique included in a different one of the following (a) through (e) location technique categories from the first set, and (B) uses at least one of the following location techniques (a) through (e) to obtain, for at least some instance of locating one of the mobile stations ($\mathbf{M_j}$),

a location estimate that is effectively different from a corresponding location estimate of $\mathbf{M_j}$ by said first location estimator;

the above cited first and second location techniques include one of more of:

(a) one of a trilateration and a triangulation technique for determining a location estimate of each mobile station ($\mathbf{M_a}$) of at least some of the mobile stations at a site not co-located with the mobile station $\mathbf{M_a}$, wherein for three or more of the communication stations in communication with the mobile station $\mathbf{M_a}$, one of: a wireless signal time of arrival, and a wireless signal time difference of arrival between the mobile station $\mathbf{M_a}$ and the three or more communication stations is obtained using a first input obtained from timing measurements of wireless signal measurements obtained from transmissions between the mobile station $\mathbf{M_a}$ and the communication stations;

wherein for at least one of the three or more communication stations, CS, the timing measurements are obtained from signals communicated during a plurality of wireless signal transmissions between the mobile station $\mathbf{M_a}$ and CS, with at least one of the transmissions being from the mobile station $\mathbf{M_a}$ to CS;

(b) a stochastic technique for determining a location estimate of each mobile station ($\mathbf{M_b}$) of at least some of the mobile stations, wherein said stochastic technique uses a statistical correlation for correlating (i) and (ii) following:

(i) a second input obtained from wireless signal measurements obtained from transmissions between the mobile station $\mathbf{M_b}$ and the communication stations, and

(ii) data, D, wherein for each location (L_B) of a plurality of locations, said data D includes one or more wireless signal measurements related to a wireless communication between some mobile station that is substantially at L_B;

wherein for at least most of said geographical locations L_B, said some mobile station is different from the mobile station $\mathbf{M_b}$; and

wherein said correlation is used for determining a likely geographical range, GR, for a location for the mobile station $\mathbf{M_b}$ and data indicative of a probability that the mobile station $\mathbf{M_b}$ is within the likely geographical range GR;

(c) a learning technique for determining a location estimate of each mobile station ($\mathbf{M_c}$) of more than one of the mobile stations, by learning an association, wherein said association is determined by a training process using a plurality of data pairs, each said pair including: first information indicative of a location L_C of some mobile station ($\mathbf{M_i}$), and second information from wireless signal measurements between said some mobile station $\mathbf{M_i}$ and one or more of the communication stations when said some mobile station $\mathbf{M_i}$ is at the location L_C,

wherein when said learning technique is supplied with a third input obtained from the wireless signal measurements obtained from transmissions between the mobile station $\mathbf{M_c}$ and at least one of a plurality of the communication stations, data indicative of a location for the mobile station $\mathbf{M_c}$ is determined;

(d) a pattern recognition location technique for estimating a location of each mobile station ($\mathbf{M_d}$) of more than one of the mobile stations, wherein said pattern recognition location technique estimates a location of the mobile station $\mathbf{M_d}$ at a location (L_D) by recognizing a pattern of characteristics of a fourth input obtained from the wireless signal measurements obtained from transmissions between the mobile station $\mathbf{M_d}$ and the communication stations, wherein said pattern of characteristics includes signal characteristic data indicative of wireless signal transmissions between the mobile station $\mathbf{M_d}$ and one or more of the communication stations; and

(e) a fifth location technique for determining a location estimate of each mobile station ($\mathbf{M_e}$) of more than one of the mobile stations, wherein said fifth location technique uses a fifth input obtained from measurements from signals received at the mobile station $\mathbf{M_e}$ from one or more non-terrestrial communication stations above and not supported on the earth's surface;

determining whether said first location estimator has its corresponding input available for determining a first location estimate of the mobile station **M**;

determining a second location estimate of said mobile station **M** by activating said second location estimator when the corresponding input for said second location estimator is available, and said corresponding input to said first location estimator is unavailable;

wherein for locating the mobile station **M**, at least one of said first and second location estimators uses said fifth technique for determining a geographical location indication for **M**, wherein a delay time of a signal from at least one of the non-terrestrial wireless communication stations to **M** is used for determining a spatial range between **M** and the at least one non-terrestrial communication station;

obtaining resulting location information for transmitting on a communications network, wherein said resulting location information is obtained using at least one of said first location estimate and said second location estimate;

wherein when said mobile station **M** is at a ~~first~~ location ($\underline{\mathbf{L}_1}$), an instance of at least said first location estimate is used in said obtaining step for obtaining a first corresponding instance of said resulting location information, and when said mobile station **M** is at a ~~second~~ location ($\underline{\mathbf{L}_2}$), an instance of at least said second location estimate is used in said obtaining step for obtaining a second corresponding instance of said resulting location information; and

wherein for the ~~first~~ location $\underline{\mathbf{L}_1}$, a performance of said obtaining step includes one of: (1) a step of improving upon said instance of at least said first location estimate, and (2) a step of providing information indicative of an accuracy of said first corresponding instance of said resulting location information.

143. (Previously Presented) The method as claimed in Claim 142, wherein

said first, second, third, and fourth inputs include data related to one or more of: a wireless signal time delay, and a wireless signal strength; and

said fifth input includes data related to GPS satellite signals.

Claims 144 through 158 were previously cancelled.

Please amend claim 159 as follows:

159. (Currently Amended) A method for locating at least one mobile station, **M**, of a plurality of mobile stations, using wireless signal data obtained from transmissions between said mobile station **M**

and at least one of a plurality of communication stations, each of the communication stations capable of at least one of: wirelessly detecting said mobile station **M**, and wirelessly being detected by said mobile station **M**, wherein at least some of said communication stations are able to provide voice communication with some of the mobile stations, including the mobile station **M**, comprising:

receiving, for each mobile station ($\mathbf{M_i}$) of: the mobile station **M**, and one or more additional ones of the mobile stations, wireless signal data obtained from transmissions between: (i) said communication stations, and (ii) said mobile station $\mathbf{M_i}$ at an unknown location, wherein said wireless signal data includes at least two of (A1) through (A3) following:

(A1) data obtained using signal timing measurements of wireless signal transmissions between said mobile station $\mathbf{M_i}$ and a set $\mathbf{S_1}$ of one or more of said at least some communication stations at terrestrial locations, wherein for at least one of the communication stations, **CS**, of the set $\mathbf{S_1}$, there is a corresponding portion of the signal timing measurements that are obtained during a plurality of wireless signal transmissions between the mobile station $\mathbf{M_i}$ and **CS**, with at least one of the transmissions being from the mobile station $\mathbf{M_i}$ to **CS**;

(A2) data obtained using time delay measurements from wireless signal transmissions between one or more non-terrestrial communication stations above and not supported on the Earth's surface, and said mobile station $\mathbf{M_i}$;

(A3) signal characteristic data, **D**, of wireless signal transmissions between said mobile station $\mathbf{M_i}$ and a set $\mathbf{S_3}$ of one or more of said communication stations, wherein (i) there is a data store including corresponding signal characteristic data for each of a plurality of terrestrial locations in a wireless coverage area provided by $\mathbf{S_3}$, (ii) said signal characteristic data **D** includes information for determining one of a correspondence and a similarity with the corresponding signal characteristic data in the data store for one or more locations **L** of the plurality of locations, and (iii) for at least one of the locations **L**, said corresponding signal characteristic data for **L** is obtained from signal transmissions from a mobile station different from $\mathbf{M_i}$;

generating a location estimate for the unknown location of said mobile station **M**, said location estimate dependent upon a geographical extent output from a corresponding instance of each of at least the location technique (B2) following, and one other of the following location techniques (B1) and (B3):

(B1) a first technique that determines location information indicative of a range between at least one of the communication stations and a mobile station being located;

wherein for locating the mobile station **M**, said corresponding instance of said first technique uses the data obtained in (A1) for **M** being $\mathbf{M_i}$, and an instance of the set $\mathbf{S_1}$ including one of the terrestrial communication stations ($\mathbf{CS_M}$) to determine a range between the mobile station **M** and the communication station $\mathbf{CS_M}$;

(B2) a second technique that determines location information indicative of a range between a non-terrestrial communication station above and not supported on the Earth's surface**[[,]]**, and a mobile station being located;

wherein for locating the mobile station **M**, said corresponding instance of said second technique uses: (i) the data obtained in (A2) for **M** being $\mathbf{M_i}$, and (ii) one of the one or more non-terrestrial communication stations (**S**) to determine a range between the mobile station **M** and the non-terrestrial communication station **S**;

(B3) a third technique that determines location information indicative of a wireless signal similarity or correspondence for transmissions between the communication stations and a mobile station being located;

wherein for locating the mobile station **M**, said corresponding instance of said third technique uses: (i) the signal characteristics **D** from (A3) for **M** being $\mathbf{M_i}$, and (ii) the data store of (A3).

160. (Previously Presented) The method as claimed in Claim 159, wherein said step of generating includes performing a stochastic technique for generating said location estimate of said mobile station **M**, wherein said stochastic technique uses a statistical correlation for correlating (1) and (2) following:

(1) information obtained from at least one of signal strength and signal time delay measurements of wireless signals between the mobile station **M** and the communication stations, and

(2) data, **U**, wherein for each location (LOC) of a plurality of locations, said data **U** includes one or more wireless signal measurements related to a wireless communication between some mobile station different from the mobile station **M** when the different mobile station is substantially at LOC, and;

wherein said correlation is used for determining: (i) a likely geographical indication, **GR**, for a location for the mobile station **M**, and (ii) data indicative of a probability that the mobile station **M** is within the likely geographical indication **GR**.

161. (Previously Presented) The method as claimed in Claim 159, wherein said step of generating includes providing at least one instance of said signal characteristic data **D** of (A3) for **M** being $\mathbf{M_i}$, to a pattern recognizer included in said third technique instance, said pattern recognizer being trainable when repeatedly provided with previously obtained wireless signal data indicative of a plurality of known mobile station locations.

Claim 162 was previously cancelled.
Please amend claim 163 as follows:

163. (Currently Amended) A mobile station location system, comprising:

a gating module for communicating with two or more mobile station location estimating sources for determining corresponding geographic extents for locations of a plurality of mobile stations, such that for each said estimating source (**ES**), **ES** is used for locating at least some of the mobile stations at various locations, wherein for each mobile station **M** of at least some of the mobile stations, a result of **ES** being supplied with corresponding data obtained from measurements of wireless signals transmitted between (A) and (B) following:

(A) the mobile station **M**, and

(B) at least one of (1) and (2) following:

(1) a plurality of communication stations capable of at least one of: wirelessly detecting said mobile stations, and being wirelessly detected by said mobile stations, and

(2) one or more non-terrestrial wireless signal transmitting stations above and not supported on the Earth's surface,

is that **ES** outputs a corresponding geographic extent of a geographical location of the mobile station **M**;

wherein for a first of said mobile station location estimating sources (**ES1**), said **ES1** is dependent upon a result from a first component included in one of the following (a) through (e) component categories, and for a second of said mobile station location estimating sources (**ES2**),**[[** ,**]]** said **ES2** is dependent upon a result from a second component for at least one instance of locating one of the mobile stations, said second component is categorized in one of the of the following (a) through (e) component categories, and for locating each instance ($\mathbf{I_j}$) of at least some location instances of the mobile stations by **ES1**, the first component is activated and without using a location estimate for the instance $\mathbf{I_j}$ from the second component, and for locating each instance ($\mathbf{I_k}$) of at least some location instances of the mobile stations by **ES2**, the second component is activated without using a location estimate for the instance $\mathbf{I_k}$ from the first component;

the component categories being as follows:

(a) a first category of components, wherein each said component of said first category estimates a geographic extent for a location of one of the plurality of mobile stations, $\mathbf{M_a}$, by identifying a similarity between (i) and (ii) following: (i) at least a portion of signal characteristic data obtained from each of a plurality of locations in a wireless coverage area serviced by the communication stations, the portion obtained using signal transmissions from a mobile station different from $\mathbf{M_a}$, and (ii) signal characteristics, including a plurality of time delayed signal strengths of wireless signals, communicated between $\mathbf{M_a}$ and at least one of the communication stations;

(b) a category of trainable mobile station location estimating components for determining geographic extents for locations of at least some of the plurality of mobile stations;

wherein each said trainable mobile station location estimating component is capable of being trained to associate: (i) each location, **L**, of a plurality of geographical locations with (ii) corresponding measurements of wireless signals transmitted between: a mobile station ($\mathbf{M_L}$), and at least one of the plurality of communication stations, wherein said mobile station $\mathbf{M_L}$ is approximately at the location **L**;

(c) a category of locus computing components for determining geographic extents for locations of at least some of the plurality of mobile stations, each of said locus computing components used for outputting geographic extents for locating more than one mobile station of the plurality of mobile stations,

wherein each of said locus computing components, when determining a geographic extent for a location of one of the plurality of mobile stations ($\mathbf{M_c}$), utilizes timing measurements for determining a locus of locations for said mobile station $\mathbf{M_c}$, and

wherein said timing measurements are a function of a signal time delay between the mobile station $\mathbf{M_c}$, and at least one of the communication stations **CS**, said communication station **CS** being secured to a fixed terrestrial location, and

wherein there is a portion of the timing measurements that are obtained during a plurality of wireless signal transmissions between the mobile station $\mathbf{M_c}$ and **CS**, with at least one of the transmissions being from the mobile station $\mathbf{M_c}$ to **CS**;

(d) a category of direction of arrival components for determining geographic extents for locations of at least some of the plurality of mobile stations, wherein each of said direction of arrival components, when determining a geographic extent for a location of one of the plurality of mobile stations ($\mathbf{M_d}$), determines the geographic extent for the mobile station $\mathbf{M_d}$ using a direction from which wireless signals arrive at at least one of the communication stations from the mobile station $\mathbf{M_d}$;

(e) a category of signal processing components, wherein each of said signal processing components (**SPC**), when determining a geographic extent for a location of one of the plurality of mobile stations ($\mathbf{M_e}$), uses wireless signals (**S**) received at the mobile station $\mathbf{M_e}$ from the non-terrestrial transmitting stations, wherein said wireless signals **S** provide time values, and said signal processing component **SPC** determines the geographic extent for $\mathbf{M_e}$ using at least one elapsed time value for the wireless signals **S**;

wherein for locating one of the plurality of mobile stations ($\mathbf{M_0}$), said gating module communicates on a communications network with at least one of said two or more location estimating sources for providing said location system with said corresponding geographic extent ($\mathbf{E_1}$) obtained from the at least one estimating source, $\mathbf{E_1}$ being for a location $\mathbf{L_0}$ of the mobile station $\mathbf{M_0}$; and

a means for determining a location estimate of the mobile station $\mathbf{M_0}$ by accessing first data obtained from or included in $\mathbf{E_1}$, and by accessing second data obtained from or included in said corresponding geographic extent ($\mathbf{E_2}$) obtained from one of said location estimating sources different from the location estimating source providing $\mathbf{E_1}$, and wherein said means for determining activates at least one of: (i) a selector for giving preference to: one of first and second data, or, one of $\mathbf{E_1}$ and $\mathbf{E_2}$ as more indicative of a location of $\mathbf{M_0}$, and (ii) a combiner for combining two or more geographic extents obtained using said first and second data;

wherein at least one of the location estimating sources for $\mathbf{E_1}$ and $\mathbf{E_2}$ is dependent upon a component from the category (e).

164. (Previously Presented) The location system, as claimed in Claim 163, wherein one or more of said estimating sources are at least one of: added, replaced and deleted by transmissions on a communication network between a portion of said location system and a site remote from said portion.

Please amend claim 165 as follows:

165. (Currently Amended) The location system as claimed in Claim 163, wherein at least some of the following limitations hold:

(a) for a geographic extent (**GE**) included in one of said first data, second data, $\mathbf{E_1}$ and $\mathbf{E_2}$, wherein **GE** has a corresponding value therewith indicative of a likelihood that the mobile station $\mathbf{M_0}$ resides in a geographical area represented by **GE**, and said combiner or said selector uses said corresponding value for obtaining said location estimate of the mobile station $\mathbf{M_0}$;

(b) said gating module activates a wireless transceiver for communicating with the plurality of communication stations;

(c) said plurality of communication stations includes base stations for wireless two way communication with said mobile stations;

(d) said non-terrestrial wireless signal transmitting stations include GPS satellites;

(e) said first category of components includes a component ($\mathbf{C_e}$) that compares a value of a wireless signal waveform obtained from at least one wireless signal measurement of the [[the]] data store for signal characteristic data with a corresponding wireless signal waveform value of a wireless communication between $\mathbf{M_a}$ and at least one of the communication stations, wherein $\mathbf{C_e}$ is used in determining $\mathbf{E_1}$;

(f) said trainable mobile station location estimating components includes a component ($\mathbf{C_f}$) for one of interpolating and extrapolating from the locations **L** of (b)(i) to obtain a geographic extent of one of the mobile stations, wherein $\mathbf{C_f}$ is used in determining $\mathbf{E_1}$;

(g) said communications network provides for a transmission with the at least one of said two or more location estimating sources via the Internet;

(h) the mobile station $\mathbf{M_0}$ has an ability to communicate with other of the mobile stations as a base station;

(i) said means for determining is at least partially included in a mobile base station;

(j) said means for determining resides at a predetermined node of a network for communication with base stations of a wireless carrier;

(k) said gating module resides at a predetermined node of a network for communication with base stations of a wireless carrier;

(l) said gating module routes activation information to said estimating sources for obtaining $\mathbf{E_1}$ and $\mathbf{E_2}$; and

(m) said gating module resides at a mobile station.

166. (Previously Presented) The location system as claimed in Claim 163, wherein said gating module uses a TCP/IP protocol for receiving said corresponding location estimate from said at least one estimating source.

167. (Previously Presented) The location system as claimed in Claim 163, further including an output gateway for: (i) receiving said location estimate of the mobile station $\mathbf{M_0}$, (ii) obtaining network information related to one or more location receiving applications, and (iii) transmitting an output, corresponding to said location estimate of the mobile station $\mathbf{M_0}$, on one or more communications networks, to said one or more location receiving applications.

168. (Previously Presented) The location system as claimed in Claim 167, wherein said one or more location receiving applications includes applications for one of: parolee surveillance, vehicle location, locating related persons, locating animals, providing a person at said mobile station M_0 with information indicative of his/her location.

Please amend claim 169 as follows:

169. (Currently Amended) A mobile station location system for locating a plurality of mobile stations (said plurality of mobile stations denoted $\mathbf{\Sigma}$);

wherein the location system communicates with a plurality of mobile station location estimating sources for at least one of (1) and (2) following:

(1) activating one or more of said mobile station location estimating sources; and

(2) receiving location related information for locating at least some of the plurality of mobile stations $\mathbf{\Sigma}$;

wherein for each said estimating source (**ES**), **ES** is used for locating one or more of the mobile stations $\mathbf{\Sigma}$, such that for each mobile station **M** of the one or more of the mobile stations, a result of **ES** being supplied with corresponding data obtained from measurements of wireless signals transmitted between (i) and (ii) following:

(i) the mobile station **M**, and

(ii) at least one of (ii-a) and (ii-b) following: (ii-a) one or more of a plurality of communication stations for use in locating at least some of the mobile stations **Σ**, and (ii-b) one or more non-terrestrial wireless signal transmitting stations above and not supported on the Earth's surface,

is that **ES** outputs a corresponding one or more location estimates of a geographical location of the mobile station **M**;

wherein for a first of said estimating sources (**ES1**),**[[,]]** said **ES1** is dependent upon a result from a first component included in one of the following (a) through (c) component categories, and for a second of said estimating sources (**ES2**),**[[,]]** said **ES2** is dependent upon a result from a second component included in a different one of the following (a) through (c) component categories for at least one instance of locating one of the mobile stations of **Σ**, wherein for the at least one instance, said first estimating source and second estimating source provide different location estimates:

(a) a first category of components, wherein for each of said components of said first category, when estimating a location of one of the mobile stations $\mathbf{M_a}$ of **Σ**, said component estimates a location of the mobile station $\mathbf{M_a}$ by identifying a similarity between (i) and (ii) following:

(i) at least a portion of signal characteristic data obtained from each of a plurality of locations in a wireless coverage area corresponding to the communication stations, the portion obtained using signal transmissions from a mobile station different from $\mathbf{M_a}$, and

(ii) signal characteristics including a plurality of time delayed signal strengths of the wireless signal measurements, communicated between $\mathbf{M_a}$ and at least one of the communication stations;

(b) a second category of components, wherein each of said components of said second category estimates locations of each mobile station $\mathbf{M_b}$ of a plurality of the mobile stations of **Σ** utilizing timing measurements of wireless signals between the mobile station $\mathbf{M_b}$ and the communication stations for determining a geographical range of the mobile station $\mathbf{M_b}$ from one of the communication stations, **CS**,

wherein said timing measurements are a function of a signal time delay between the mobile station $\mathbf{M_b}$, and **CS**,

wherein said communication station **CS** is attached to the Earth ~~ground~~, and

wherein there is a portion of the timing measurements that is obtained during a plurality of wireless signal transmissions between the mobile station $\mathbf{M_b}$ and **CS**, with at least one of the transmissions being from the mobile station $\mathbf{M_b}$ to **CS**;

(c) a category of signal processing components, wherein each of said signal processing components estimates a location of one of the mobile stations $\mathbf{M_c}$ of $\mathbf{\Sigma}$ using data indicative of wireless signals (**S**) received at the mobile station $\mathbf{M_c}$ from the non-terrestrial transmitting stations, wherein said wireless signals **S** provide time values, and said signal processing component obtains a spatial range between $\mathbf{M_c}$ and one of the non-terrestrial transmitting stations using an elapsed time of said wireless signals **S** transmitted from the one non-terrestrial transmitting station;

the location system comprising:

an interface for communicating with the plurality of estimating sources for locating at least one mobile station $\mathbf{M_0}$ of $\mathbf{\Sigma}$, said interface for communicating on a communications network with at least said first estimating source **ES1** for thereby at least one of (3) and (4) following:

(3) requesting activation of said first estimating source, and

(4) receiving first location information, from said first estimating source, wherein a corresponding location estimate ($\mathbf{E_1}$) of the mobile station $\mathbf{M_0}$ is included in said first location information;

a resulting location determiner for determining a location estimate of a location $\mathbf{L_0}$ of the mobile station $\mathbf{M_0}$, wherein said resulting location determiner accesses first data obtained from said first location information, and second data obtained from said second estimating source **ES2**, wherein said resulting location determiner activates at least one of (iii) and (iv) following:

(iii) a selector for giving preference, as more indicative of the location $\mathbf{L_0}$, to at least one of said first data and said second data; and

(iv) a combiner for obtaining said likely location estimate as a function of said first data and said second data;

wherein at least one of first data and said second data is dependent upon an activation of a component from the category (c).

170. (Previously Presented) The mobile station location system of Claim 169, wherein at least some of said communication stations provide non-location related communications with $\mathbf{M_0}$.

Claim 171 was previously cancelled.

Please amend claim 172 as follows:

172. (Currently Amended) The mobile station location system of Claim 169, further including at least one data base having performance information indicative of a performance of at least one of said first and second estimating sources in providing previous location estimates of at least some of the mobile stations of Σ, wherein said performance information is used for determining a measurement of a likelihood of the mobile station M_0 being in a geographical location represented by a location estimate output by the at least one of said first and second estimating sources.

Claims 173 through 178 were previously cancelled.

179. (Previously Presented) A method for locating a wireless mobile station, comprising:

repeatedly performing the following steps (A1) through (A3) for locating the mobile station;

(A1) obtaining location related information for locating the mobile station, said location related information obtained from using at least one of (a) and (b) following:

(a) wireless timing signals received by the mobile station from one or more satellites, wherein said timing signals from each of the one or more satellites identify a location of the mobile station; and

(b) time delays of wireless signals transmitted between the mobile station and one or more transceivers of a plurality of terrestrial transceivers cooperatively linked together for use in locating the mobile station, wherein said time delays identify a locus of locations of the mobile station from at least one of the transceivers, and wherein for one of the one or more transceivers, a corresponding one of the time delays is obtained from signals transmitted during a plurality of wireless signal transmissions between the mobile station and the at least one transceiver, with at least one of the transmissions being from the mobile station to the at least one transceiver;

wherein an instance of the location related information obtained from each of (a) and (b) is used at some time for determining a respective location of the mobile station;

(A2) determining data for a graphical presentation of a likely location of the mobile station from at least one of the instances of the location related information by determining a likely roadway upon which the mobile station is located; and

(A3) providing said data for a graphical presentation for displaying on a display device;

wherein for at least one performance (P) of the repeated performances of the steps (A1) through (A3), the location related information from the wireless timing signals of (a) for P is preferred for determining the corresponding graphical presentation for P over location related information from time delays of timing signals of (b), unless there is a reduced or no effectiveness for locating the mobile station by wireless timing signals according to (a) for P.

180. (Previously Presented) The method of Claim 85, wherein for at least said mobile station **M**, said first and second estimators determine said first and second geographical indications independently of one another.

Claim 181 was previously cancelled.

182. (Previously Presented) The method of Claim 85, wherein said at least one communication station transmits a first wireless signal to the mobile station **M** and receives in response to said first wireless signal, a responsive signal from the mobile station **M**, and any intermediary devices for transmitting signals between said mobile station **M** and the communication stations are terrestrial.

183. (Previously Presented) The method of Claim 182, wherein said plurality of communication stations includes at least some communication stations that are able to provide voice communication between the mobile station **M** and another party, and the mobile station **M** is hand-held.

184. (Previously Presented) The method of Claim 183, wherein said communication between the mobile station **M** and the another party uses a wireless protocol provided by a commercial radio service provider.

185. (Previously Presented) The method of Claim 85, further including providing a wireless transmission to a second mobile station, wherein said second mobile station is capable of moving toward the mobile station **M** by using said wireless transmission for locating **M**.

186. (Previously Presented) The method of Claim 85, wherein said first technique determines both (a) and (b) following: (a) said distance between a first instance of the at least one communication station **CS** and the mobile station **M**, and (b) a wireless signal direction-of-arrival between the mobile station **M** and a second instance of the at least one communication station **CS**.

187. (Previously Presented) The method of Claim 97, wherein said one or more location evaluators provide the first collection of location estimates using all three of the techniques (i), (ii) and (iii).

188. (Previously Presented) The method of Claim 97, wherein said mobile station **M** includes a mobile telephone that communicates with at least some of said communication stations using a wireless protocol provided by a commercial radio service provider.

Claim 189 was previously cancelled.

190. (Previously Presented) The method of Claim 99 further including a step of receiving an instance of at least one of said first, second, third and fourth input from a commercial mobile radio service provider (CMRS).

191. (Previously Presented) The method of Claim 99, wherein said third technique uses a time difference of arrival of wireless signals transmitted between the mobile station M3 and the communication station CS for determining a locus of points having a hyperbolic shape.

192. (Previously Presented) The method of Claim 99, wherein the communication station CS transmits a first wireless signal to the mobile station M3 and receives in response to said first wireless signal, a responsive signal from the mobile station M3, and any intermediary devices for transmitting signals between the M3 and the communication stations are terrestrial.

193. (Previously Presented) The method of Claim 99, wherein said step of first transmitting includes responding to an Internet request to locate the first mobile station.

194. (Previously Presented) The method of Claim 193, wherein the first mobile station is provided by a vehicle.

Please amend Claim 195 as follows:

195. (Currently Amended) The method of Claim 97, wherein said ~~fourth~~ third technique includes performing one of: a least squares process, partial least squares process, and a principle decomposition process.

Claims 196 through 198 were previously cancelled.

199. (Previously Presented) The method of Claim 85 further including a step of transmitting said resulting location estimate via one of the Internet and a public switched telephone network.

200. (Previously Presented) The method of Claim 97, wherein said step of transmitting includes transmitting said resulting information via one of the Internet and a network supporting voice communication.

Claim 201 was previously cancelled.

202. (Previously Presented) The method of Claim 106, wherein at least one of said adaptable location estimators adapts by one of:

learning an association for associating, for each of at least some of said data collections, said geographical location representation (a1) of the data collection with said set of said wireless signal measurements (a2) of the data collection; and

determining a statistical similarity between (1) and (2) following: (1) wireless signal measurements obtained from transmissions between said mobile station **M** and the network, and (2) said wireless signal measurements (a2) of the data collections in said archive.

Claims 203 through 246 were previously cancelled.

247. (Previously Presented) The method of Claim 121, wherein said communication between the mobile station and the one terrestrial station uses a wireless protocol provided by a commercial radio service provider.

248. (Previously Presented) The method of Claim 133, further including a step of:

providing communication between the mobile station and another party via at least one of the communication stations, wherein the communication travels through a network that supports voice communication.

Please amend Claim 249 as follows:

249. (Currently Amended) The method of Claim 137, further including the steps of:

providing communication between the mobile station **M** and another party via at least one of the communication stations, wherein the communication travels through a publicly accessible communications network; and

requesting one or more of the first and second location related information in response to signals received from a commercial mobile radio service provider wirelessly communicating with the mobile station **M.**

Claim 250 was previously cancelled.

251. (Previously Presented) The method of Claim 85, further including at least one of the following steps:

(i) activating at least one common predetermined mobile station location related component for determining said resulting location estimate for the mobile station **M** and for determining a second resulting location of a second mobile station, wherein the location related component is not activated when determining said resulting location estimate for **M** until after at least one of said steps of first and second receiving is performed;

(ii) providing information for activating the first and second location estimators, wherein said information for activating is output by a common activation requesting component; and

(iii) accessing an attribute related to one or more of: an error in a geographical extent within which the mobile station **M** is expected to be, an accuracy in a geographical extent within which the mobile station **M** is expected to be, and a likelihood of the mobile station **M** being located in said resulting location estimate.

252. (Previously Presented) The method of Claim 190, wherein for said third technique, the at least one communication station CS is one of: included in, and co-located with a base station of said CMRS, wherein CS is in two way communication with the mobile station M3.

253. (Previously Presented) The method of Claim 97, further including, following said step of obtaining, a step of selecting at least one of the one or more location estimates that is likely to be approximate to the unknown location.

Claims 254 through 257 were previously cancelled.

258. (Previously Presented) The location system of Claim 106, wherein said interface includes a network interface for receiving a request for locating, at one or more locations, the mobile station **M** via the Internet; and further including an output gateway for transmitting, via the Internet to a particular Internet destination, a resulting location estimate for the mobile station **M**, wherein said resulting location estimate is dependent upon one or more location estimates determined by a selected one of said plurality

of location estimators, and wherein said resulting location estimate is determined according to an output criteria for the one destination, said output criteria including one or more of: a representation of an accuracy of said resulting location estimate, and a frequency of providing the one destination with one or more instances of said resulting location estimates.

Claims 259 through 262 were previously cancelled.

263. (Previously Presented) The method of Claim 118, wherein at least one occurrence of said step of outputting includes transmitting said resulting location information via a telephony network.

264. (Previously Presented) The method of Claim 119, further including a step of outputting said resulting location estimate to a destination via a communications network.

265. (Previously Presented) The method of Claim 264, wherein said destination is the mobile station $\mathbf{M_1}$.

266. (Previously Presented) The method of Claim 121, further including a step of:

providing communication between the mobile station and another party via at least one of the terrestrial stations, wherein the communication travels through a network supporting voice communication.

267. (Previously Presented) The method of Claim 121, further including the steps of:

requesting one or more of the first and second resulting location estimates via signals transmitted by a commercial mobile radio service provider, wherein the commercial radio service provider wirelessly communicates with the mobile station; and

transmitting, via a communication network, at least one location of the mobile station to one of: the mobile station, another mobile station, a police unit, a vehicle, and a party requesting the location of the mobile station.

268. (Previously Presented) The method of Claim 126, further including communicating via a network with a predetermined node of the network corresponding to the source, wherein the communication includes said resulting location information, and the resulting location is dependent upon at least the first location information.

Please amend Claim 269 as follows:

269. (Currently Amended) The method of Claim 131, further including a step of transmitting said resulting location information ~~estimate~~ on a communications network to a predetermined destination, said resulting location information ~~estimate~~ including the data [[(D)]] identifying one or more geographical features, wherein for at least one of the geographical features, the data identifying one or more geographical features [[D]] includes an identification of a known path.

270. (Previously Presented) The method of Claim 133, wherein said step of determining includes a step of determining one or more subareas included in said resulting location, and a corresponding likelihood of the mobile station being in each of the subareas, said one or more subareas selected from a predetermined plurality of subareas.

271. (Previously Presented) The method of Claim 133, further including requesting one or more of the first and second location related information in response to signals received from a commercial mobile radio service provider wirelessly communicating with the mobile station.

Please amend Claim 272 as follows:

272. (Currently Amended) The method of Claim 133, further including transmitting the resulting location estimate, via a communication network.

273. (Previously Presented) The method of Claim 99, wherein: for data (D_1) related to a geographical location of said first mobile station, and for data (D_2) related to a geographical location of said second mobile station, D_1 and D_2 each includes information indicative of at least one of: a location accuracy, a location likelihood, an environmental condition of a location, a timestamp of a location, a location processing performed, a description of how or why a location related output was obtained; and

at least one of said steps (A) and (B) below are performed:

(A) receiving from a common predetermined interface both D_1 and D_2; and

(B) receiving in a common predetermined data representation format both D_1 and D_2.

274. (Previously Presented) The method of Claim 99, wherein said second location information is dependent upon an instance of said third data for locating the second mobile station.

Please amend Claim 275 as follows:

275. (Currently Amended) The method of Claim [[419]] 411 wherein said at least one technique is said third technique.

Please amend Claim 276 as follows:

276. (Currently Amended) The method of Claim [[419]] 411 wherein said at least one technique is said first technique.

277. (Previously Presented) The method of Claim 99, wherein said steps of first and second determining use at least one common predetermined mobile station location related component for determining, respectively, said first output location data and said second output location data, wherein said common predetermined component accesses the first and second output criteria for determining, respectively, said first and second output location data.

278. (Previously Presented) The method of Claim 99, wherein said steps of first and second transmitting includes outputting said first and second output location data via a common predetermined network interface.

279. (Previously Presented) The method of Claim 99, wherein said first determining step includes accessing mobile station location output frequency information of said first output criteria.

280. (Previously Presented) The method of Claim 99, wherein said first determining step includes determining a first location estimate of the first mobile station, wherein a subsequent location estimate of the first mobile station is an improvement thereof.

281. (Previously Presented) The method of Claim 99, wherein at least one of (a) and (b) following hold: (a) at least one of said first determining and said first transmitting steps includes determining a particular protocol for outputting said first output location data on the corresponding communication network for transmission to the corresponding destination for the first request, and (b) at least one of said second determining and said second transmitting steps includes determining a particular protocol for outputting said second output location data on the corresponding communication network for transmission to the corresponding destination for the second request.

282. (Previously Presented) The method of Claim 99, wherein at least one of (1) and (2) following hold: (1) for said step of first determining, said first output criteria includes information for determining said representation of said first geographical indication using a location of a known first geographical feature different from the communication stations, and (2) for said step of second determining, said second output criteria includes information for determining said representation of said second geographical indication using a location of a known second geographical feature different from the communication stations.

283. (Previously Presented) The method of Claim 282, wherein for one of the (1) and (2) that holds, the corresponding one of first and second geographical features includes a roadway.

284. (Previously Presented) The method of Claim 99, wherein said corresponding destination for said first location request is for a first use, and said corresponding destination for said second location request is for a second use, wherein said first and second uses, respectively, use said first and second output location data differently.

285. (Previously Presented) The method of Claim 284, wherein each of said first and second uses is for one of the following: (i) responding to emergency calls, (ii) tracking mobile stations, (iii) routing mobile stations, (iv) determining one of: people and animal locations including applications for confinement to or exclusion from certain areas, (v) performing parolee surveillance, and (vi) responding to a mobile station user's request for the user's location.

286. (Previously Presented) The method of Claim 284, wherein said first output criteria includes information for determining a first location granularity at which a location estimate of the first mobile station is transmitted, wherein said first location granularity is dependent upon said first use, and said second output criteria includes information for determining a second location granularity at which a

location estimate of the second mobile station is transmitted, wherein said second location granularity is dependent upon said second use.

287. (Previously Presented) The method of Claim 284, wherein said first output criteria includes information for determining a first representation for said first output location data, wherein said first representation is dependent upon said first use, and said second output criteria includes information for determining a second representation for said second output location data, wherein said second representation is dependent upon said second use.

Claims 288 and 289. were previously cancelled.

290. (Previously Presented) The method of Claim 99, wherein at least one of said steps of receiving, first obtaining, second obtaining, first transmitting, and second transmitting receives or transmits wireless location related information on a TCP/IP network.

291. (Previously Presented) The method of Claim 99, wherein said step of first obtaining includes receiving a first location estimate from a first of said location determining sources which performs an instance, $\mathbf{I_1}$, of said first technique for estimating a location of the first mobile station, wherein said instance $\mathbf{I_1}$ uses wireless signals, S, between the first mobile station and at least one of the communication stations to improve at least one performance characteristic of said instance $\mathbf{I_1}$ over a performance of $\mathbf{I_1}$ without use of the wireless signals between the first mobile station and the at least one communication station.

292. (Previously Presented) The method of Claim 291, wherein the instance $\mathbf{I_1}$ uses first information for locating the first mobile station, wherein the first information is dependent upon signal timing measurements from the wireless signals S.

293. (Previously Presented) The method of Claim 291, wherein the instance $\mathbf{I_1}$ uses first information from the wireless signals S, wherein the first information is dependent upon a wireless coverage area of the at least one communication station.

294. (Previously Presented) The method of Claim 99, further including a step of providing display information for displaying a representation of a location estimate L of the first mobile station, wherein

said display information is for displaying a map of an area having the location estimate L, and for concurrently displaying information indicating an accuracy of the location estimate L.

295. (Previously Presented) The method of Claim 294, wherein said display information is displayed at a mobile station M that has requested a location of the first mobile station.

296. (Previously Presented) The method of Claim 118, wherein said outputting step includes providing accuracy information indicating an accuracy of said resulting location information, wherein said accuracy information is displayed with said at least one location of the mobile station.

297. (Previously Presented) The method of Claim 118, wherein for at least one location of the mobile station said step of determining uses both said first and second values.

Please amend claim 298 as follows:

298. (Currently Amended) The method of Claim 118, wherein said first location technique ~~includes a step of using~~ uses wireless signals, **S**, between the mobile station and at least one terrestrial transceiver to improve said first location information over a performance of said first location technique without using the wireless signals between the mobile station and the at least one terrestrial transceiver[[;]]

~~wherein said step of determining includes a step of determining a roadway upon which the mobile station is located~~.

299. (Previously Presented) The method of Claim 298, wherein said first location technique includes a step of using information dependent upon a wireless coverage area of the at least one transceiver for improving said first location information.

300. (Previously Presented) The method of Claim 299, wherein the at least one transceiver is co-located with a base station for providing two way communication with the mobile station.

Claims 301 through 311 were previously cancelled.

Please amend claim 312 as follows:

312. (Currently Amended) The method of Claim 119, wherein:

(a) said first location estimator performs said signal processing technique for obtaining said first information for $\mathbf{M_1}$ wherein $\mathbf{I_5}$ is $\mathbf{M_1}$; and

(b) said first information is selected over said second information received from said second mobile station location estimator~~, wherein said first information receives preference in determining said resulting location~~ unless there is information indicating a likelihood of said first information providing reduced performance in locating said mobile station $\mathbf{M_1}$.

313. (Previously Presented) The method of Claim 119, wherein: said first location estimator performs said signal processing technique when determining said first information, and also performs said locus computing technique for obtaining said first information.

314. (Previously Presented) The method of Claim 119, further including a step of providing display information for: (a) displaying a representation of said resulting location estimate, wherein said display information is for displaying with a map of an area having the resulting location estimate, and (b) concurrently displaying information indicative of an accuracy of the resulting location estimate.

Please amend claim 315 as follows:

315. (Currently Amended) The method of Claim 121, wherein said determining step includes determining at least one of said first and second resulting location estimates as a function of a position of a known stationary geographical feature that is sufficiently close to a geographic location of a corresponding instance $\mathbf{I_1}$ or $\mathbf{I_2}$ ~~used to determine said at least one resulting location estimate~~ so that the location of the geographical feature is used to determine said at least one resulting location estimate.

316. (Previously Presented) The method of Claim 121, wherein TS is one of: a mobile base station, and a fixed location base station.

317. (Previously Presented) The method of Claim 126, wherein activation information is provided to the first and second location techniques via a predetermined common data distribution component, wherein said component distributes mobile station location data specific to each of the first and second location techniques according to a content of said data expected by the location technique.

318. (Previously Presented) The method of Claim 126, further including a step of determining said resulting location information according to output criteria corresponding to the source.

Please amend Claim 319 as follows.

319. (Currently Amended) The method of Claim [[318]] 126, wherein the outputting step includes a step of providing said location data for one of: performing a routing function for routing the mobile station, responding to a user of said mobile station request for location, locating a child, locating a stolen vehicle, and keeping entities apart.

320. (Previously Presented) The method of Claim 126, wherein said resulting location information includes one or more of:

(a) a value indicative of a likelihood of the mobile station being at a location estimate represented by the resulting location information;

(b) data identifying one or more known geographical extents, wherein each of the geographical extents is determined using an associated location estimate (L) of the mobile station, wherein the one or more geographical extents provide additional location information not provided by their associated location estimate L; and

(c) at least one of: a speed of the mobile station, a direction of the mobile station, a change in speed of the mobile station, and a change in direction of the mobile station.

321. (Previously Presented) The method of Claim 126, wherein said first location technique uses wireless signals, S, between the mobile station and a terrestrial wireless transceiver to improve at least one performance characteristic of said first location technique over a performance of said first location technique without use of the wireless signals S.

322. (Previously Presented) The method of Claim 126, further including providing mapping data of an area having a location estimate (L) of said mobile station wherein L is included in said resulting location information, and providing for concurrent display, with said mapping data, information indicating an accuracy of the location estimate L.

323. (Previously Presented) The method of Claim 131, wherein the step of determining includes using output criteria corresponding to an application identified for receiving the resulting location information.

Please amend Claim 324 as follows.

324. (Currently Amended) The method of Claim 323, wherein said output criteria includes at least some of:

(a) an identification of a transmission protocol;

(b) a granularity in which a location estimate of the mobile station represented by said resulting location information is to be provided;

(c) a frequency with which repeated location estimates of the mobile station are to be output to the application;

(d) destination data for determining where said resulting location information is to be transmitted;

(e) an indication as to whether a location estimate of the mobile station is to be adjusted according to a known geographical feature different from the communication stations; and

(f) a desired representation of a location estimate of the mobile station represented by said resulting location information.

325. (Previously Presented) The method of Claim 134, wherein said first obtaining step includes receiving said first mobile station related location information determined, at least partially, by said first technique.

326. (Previously Presented) The method of Claim 325, wherein said additional data includes one of:

(a) data from a transmission from a base station, wherein the base station is included in said collection of one or more of the plurality of terrestrial communication stations, and the base station is detected by the first mobile station, said base station having a substantially reduced wireless coverage area in comparison to at least one of the terrestrial communication stations;

(b) a location estimate for the first mobile station determined by a site remote from the first mobile station and transmitted to the first mobile station via a base station of the commercial mobile radio service provider, wherein the site is used for determining location information for a plurality of the mobile stations; and

(c) data indicative of wireless timing measurements for wireless signals received at the first mobile station from one of the communication stations of said collection of one or more of the plurality of terrestrial communication stations.

327. (Previously Presented) The method of Claim 325, wherein said third technique further includes a transmission from the first mobile station to a communication station of said collection for requesting said additional data.

Please amend Claim 328 as follows.

328. (Currently Amended) The method of Claim 134, wherein when a different mobile station replaces the first mobile station in said steps of receiving, generating, first obtaining and determining, a same site performs at least one of said steps for locating each of the first and the different mobile station**[[**s**]]**, and wherein for locating the different mobile station, said one or more location estimators perform a different collection of one or more of said first, second, third, and fourth techniques from those used for locating the first mobile station.

329. (Previously Presented) The method of Claim 137, wherein for the substantially same location, said first value has an associated first preference and said second value has an associated second preference, and said first and second preferences are used in determining said resulting location estimate.

330. (Previously Presented) The method of Claim 140, wherein a performance of said obtaining step, using said first location estimate, includes said step of improving upon said instance of at least said first location estimate so that said resulting location information is expected to be more accurate than said first location estimate.

331. (Previously Presented) The method of Claim 140, wherein a performance of said obtaining step includes said step of providing information indicative of an accuracy of said first corresponding instance.

332. (Previously Presented) The method of Claim 142, wherein a performance of said obtaining step includes performing said step of improving upon said instance of at least said first location estimate so that said first corresponding instance of said resulting location information is expected to be more accurate than said first location instance.

333. (Previously Presented) The method of Claim 142, wherein a performance of said obtaining step includes performing said step of providing information indicative of an accuracy of said first corresponding instance of said resulting location information.

334. (Previously Presented) The method of Claim 142, wherein said first location estimator is dependent upon a result from at least two of said location technique categories, wherein one of said at least two location categories is one of said location technique categories (a) and (e).

335. (Previously Presented) The system of Claim 169, wherein said mobile station location system includes both of: said selector and said combiner.

336. (Previously Presented) The system of Claim 169, wherein said resulting location determiner includes said selector.

337. (Previously Presented) The system of Claim 336, wherein said second data includes a corresponding location estimate ($\mathbf{E_2}$) for $\mathbf{M_0}$, and said selector uses one of: (i) a predetermined preference of one of said corresponding location estimates $\mathbf{E_1}$ and $\mathbf{E_2}$ over another of said corresponding location estimates $\mathbf{E_1}$ and $\mathbf{E_2}$, (ii) a preference of one of said corresponding location estimates $\mathbf{E_1}$ and $\mathbf{E_2}$ over another of said corresponding location estimates $\mathbf{E_1}$ and $\mathbf{E_2}$ determined according to a past mobile station locating performance for each of the first and second estimating sources, (iii) a preference according to signaling or environmental characteristics of a geographical area, and (iv) a preference according to a consistency of one of said corresponding location estimates $\mathbf{E_1}$ and $\mathbf{E_2}$ with another of said corresponding location estimates.

Please amend claim 338 as follows:

338. (Currently Amended) The system of Claim 169, further including an output gateway for transmitting location information, indicative of said location estimate, to a predetermined destination, on one or more communication networks, wherein said location information is determined using a description ~~criteria~~ indicative of an expected input by the destination, the description ~~criteria~~ being one of a plurality of stored descriptions ~~criteria~~ indicative of expected inputs by a plurality of different destinations.

339. (Previously Presented) The system of Claim 338, wherein said location information includes data indicative of a time when said location information is indicative of a location of the mobile station $\mathbf{M_0}$.

340. (Previously Presented) The system of Claim 169, wherein said resulting location determiner includes said combiner.

Please amend claim 341 as follows:

341. (Currently Amended) The system of Claim 340, wherein said second data includes a corresponding location estimate ($\mathbf{E_2}$) for $\mathbf{M_0}$, and said combiner includes a most likely mobile station location estimator that determines a most likely estimate of the mobile station $\mathbf{M_0}$ as function of one of: (i) an expected likeliness of the mobile station $\mathbf{M_0}$ being in at least one of $\mathbf{E_1}$ and $\mathbf{E_2}$, (ii) an output indicative of a consistency between wireless signal measurements obtained using signal transmissions from a mobile station different from $\mathbf{M_0}$ and wireless signal measurements from $\mathbf{M_0}$ for determining at least one of $\mathbf{E_1}$ and $\mathbf{E_2}$, (iii) an output indicative of a consistency of ~~between~~ a geographic feature of an area overlapping with at least one of $\mathbf{E_1}$ and $\mathbf{E_2}$, ~~and~~ with a characteristic of a movement of $\mathbf{M_0}$, and (iv) an output indicative of a consistency between a collection of one or more location estimates of the mobile station $\mathbf{M_0}$ for one or more previous locations of $\mathbf{M_0}$, and at least one of $\mathbf{E_1}$ and $\mathbf{E_2}$.

342. (Previously Presented) The method as claimed in Claim 159, further including a step of determining, using said location estimate, output location information by accessing output criteria corresponding to a request for data related to a location of the mobile station **M**.

Please amend Claim 343 as follows:

343. (Currently Amended) The method of Claim 342, wherein said output criteria includes at least some of:

(a) an identification of a transmission protocol;
(b) a granularity for representing a location estimate (LE) of the mobile station **M**, wherein LE is represented by said output location information;
(c) a frequency with which repeated location estimates of the mobile station **M** are to be output to a destination corresponding to the request;
(d) destination data for determining where said output location information is to be transmitted; and
(e) an indication as to whether a location estimate of the mobile station **M** is to be adjusted according to a known geographical feature different from the communication stations.

Please amend Claim 344 as follows:

344. (Currently Amended) The method of Claim 159, further including a second step of generating a second location estimate for an unknown location of one of the additional mobile stations, wherein said second location estimate is dependent upon a different collection[[,]] of one or more instances, of said first, second and third techniques than used to generate the location estimate for the mobile station **M**.

345. (Previously Presented) The method of Claim 159, wherein said location estimate has associated therewith a timestamp.

Please amend Claim 346 as follows:

346. (Currently Amended) The method of Claim 159, further including a step of outputting output location information for display, wherein a location accuracy of said location estimate is included in said output location information, said location accuracy identified with ~~represented as~~ one or more geographical areas on a map displayed at a destination for the output location information.

347. (Previously Presented) The method of Claim 159, wherein said step of generating includes giving preference to the geographical extent from said instance of one of said first, second and third techniques over the geographical extent from said instance of a different one of said first, second and third techniques.

348. (Previously Presented) The method of Claim 159, wherein said step of generating includes preferring a common area of said geographical extents upon which the location estimate is dependent.

349. (Previously Presented) The method of Claim 163, wherein said combiner is activated by said means for determining, and said combiner determines said location estimate of the mobile station $\mathbf{M_0}$ by identifying an area common to said $\mathbf{E_1}$ and $\mathbf{E_2}$ as being more likely to be in said likely location estimate.

Please amend Claim 350 as follows:

350. (Currently Amended) A method for locating mobile stations, comprising:

providing access to each of a plurality of mobile station location determining resources for determining corresponding instances of location information for locating mobile stations using corresponding data obtained from measurements of wireless signals transmitted between:

(i) the mobile stations, and

(ii) one or more of: (1) one or more of a plurality of communication stations capable of at least wirelessly detecting the mobile stations, and (2) one or more non-terrestrial wireless signal transmitting stations above and not supported on the Earth's surface;

for each mobile station **M** of some of said mobile stations, perform steps (A) through (F) following:

(A) first providing data to a first of said resources for obtaining a first instance of said corresponding location information for the mobile station **M** at a location $\mathbf{L_1}$, wherein in determining said first instance, said first resource uses a result from a first location technique included in at least one of the location determining categories (b1) through (b5) following said step of second providing below;

(B) second providing data to a second of said resources for obtaining a second instance of said corresponding location information for the mobile station **M** at a location $\mathbf{L_2}$, wherein said second resource uses a result from a second location technique included in at least one of the location determining categories (b1) through (b5), and for locating an instance ($\mathbf{I_j}$) of at least some location instance of the mobile station by the first resource, the first location technique is activated, and a location estimate from the second location technique is not used, and for locating an instance ($\mathbf{I_k}$) of at least some location instance of the mobile station by the second resource, the second location technique is activated, and a location estimate from the first location technique is not used[[:]];

the location determining categories being:

(b1) a first category of location determining techniques, wherein each said technique ($\mathbf{T_1}$) of said first category determines a geographical extent $\mathbf{G_a}$ for a location of a mobile station ($\mathbf{M_a}$) by identifying a pattern of signal characteristics for wireless signals communicated between $\mathbf{M_a}$ and the communication stations as likely to have been a result of $\mathbf{M_a}$ being in $\mathbf{G_a}$, wherein said $\mathbf{T_1}$ performs ~~said identifying~~ the identification by determining a similarity between:

(b1-1) one or more of said signal characteristics of communication with $\mathbf{M_a}$, and

(b1-2) data obtained from a survey of wireless signal characteristics in an area including said geographical extent $\mathbf{G_a}$;

(b2) a second category of location determining techniques, wherein each said technique of said second category determines a geographical extent $\mathbf{G_b}$ for a location of a mobile station ($\mathbf{M_b}$) as a result of (I) and (II) following:

(I) generating an association for associating: (i) each location **L** of a plurality of geographical locations with (ii) data indicative of corresponding measurements of wireless signals transmitted between some one of said mobile stations, different from $\mathbf{M_b}$, and the communication stations, wherein said some mobile station is approximately at the location **L**, and

(II) using said association together with characteristics of signals communicated between $\mathbf{M_b}$ and the communication stations for determining the geographical extent $\mathbf{G_b}$ for the location of $\mathbf{M_b}$;

(b3) a third category of offset determining techniques, wherein each said offset determining technique determines a geographical extent $\mathbf{G_c}$ for a location of a mobile station ($\mathbf{M_c}$);

wherein said offset determining technique utilizes one or more timing measurements of wireless signals between the mobile station $\mathbf{M_c}$ and a plurality of the communication stations for determining the geographical extent $\mathbf{G_c}$;

wherein said timing measurements are a function of a signal time delay between the mobile station $\mathbf{M_c}$ and at least one communication station **CS** of the plurality of communication stations, and said timing measurements are for determining $\mathbf{G_c}$ as a function of at least: a location of **CS**, and a predetermined formula representative of a geometric curve for determining a horizontal position of $\mathbf{M_c}$;

wherein there is a corresponding portion of the signal timing measurements that are obtained during a plurality of wireless signal transmissions between the mobile station $\mathbf{M_c}$ and **CS**, with at least one of the transmissions being from the mobile station $\mathbf{M_c}$ to **CS**;

wherein said communication station **CS** is supported on the Earth ~~ground~~; and

wherein each of said offset determining techniques determines a geographical extent for a location of each of a plurality of different mobile stations;

(b4) a fourth category of direction of arrival location determining techniques wherein each said direction of arrival technique determines a geographical extent for a location of a mobile station ($\mathbf{M_d}$) by determining an angular orientation about a communication station $\mathbf{CS_d}$ of a direction of the mobile station $\mathbf{M_d}$ using a measurement of a wireless signal angle of arrival of wireless signals transmitted between the mobile station $\mathbf{M_d}$ and the communication station $\mathbf{CS_d}$;

(b5) a fifth category of wireless location techniques wherein each said technique ($\mathbf{T_5}$) of said fifth category determines a geographical extent for a location of a mobile station ($\mathbf{M_e}$) using wireless signals received at the mobile station $\mathbf{M_e}$ from the non-terrestrial transmitting stations, wherein said wireless signals provide time values, and said technique $\mathbf{T_5}$ determines at least one elapsed time for signal transmissions to $\mathbf{M_e}$ for the wireless signals transmitted by one or more of the non-terrestrial transmitting stations;

(C) first obtaining first structured location data using said first instance;

(D) second obtaining second structured location data using said second instance, wherein said second location technique is included in at least said fifth category;

wherein each of said first and second structured location data includes a common data representation for a plurality of location attributes, said representation including (d1) through (d2) following:

(d1) a collection of one or more attributes $\mathbf{A_1}$ for representing a geographical extent within which a mobile station being located is expected to be;

(d2) a collection of one or more attributes related to at least one of: an error in data for $\mathbf{A_1}$, and a likelihood of the mobile station being located being in the geographical extent represented by data for $\mathbf{A_1}$;

(E) generating resulting location information of a location $\mathbf{L_M}$ of the mobile station **M**, said resulting location information being dependent upon data for said attributes (d1) and (d2) obtained from at least one of said first and second structured location data; and

(F) outputting said subsequent location information to a predetermined destination on a communications network.

351. (Previously Presented) The method of Claim 350, wherein said plurality of location attributes further includes an attribute for a timestamp.

352. (Previously Presented) The method of Claim 350, wherein said plurality of location attributes further includes an attribute for descriptor information indicative of a reason that another one of said plurality of location attributes has its corresponding value.

353. (Previously Presented) The method of Claim 350, wherein said plurality of location attributes includes the attribute related to an error in data for $\mathbf{A_1}$.

354. (Previously Presented) The method of Claim 350, wherein said plurality of location attributes includes the attribute related to a likelihood of the mobile station being located being in the geographical extent represented by $\mathbf{A_1}$.

355. (Previously Presented) The method of Claim 350, wherein said step of providing and at least one of said steps (A) through (F) are performed at one of: a mobile base station, and a stationary site.

356. (Previously Presented) The method of Claim 350, wherein said first location technique is performed at a site remote from the mobile station **M**.

357. (Previously Presented) The method of Claim 350, further including performing said outputting step according to a frequency of output desired by the destination.

358. (Previously Presented) The method of Claim 350, further including a step of outputting said resulting location to the destination on the communications network for one of the following uses: surveilling a parolee, locating an animal, locating a person related to a person initiating the request, providing a caller with his/her location, routing a vehicle, and used for keeping at least two entities apart.

Please amend Claim 359 as follows:

359. (Currently Amended) The method of Claim 350, further including a step of receiving a request for locating the mobile station **M**, wherein said request is related to ~~one of:~~ a location of a vehicle via the Internet.

360. (Previously Presented) The method of Claim 350, wherein said step of first providing includes a step of requesting activation of said first resource via a communication on the Internet.

Please amend Claim 361 as follows:

361. (Currently Amended) The method of Claim 85, wherein at least one of said first and second location related information is determined using ~~said~~ the signal location technique (d), and the signal location technique further includes a step of selecting one or more of the geographical location representations of (d2)(i) that are likely to be approximate to the unknown location of the mobile station **M**.

Claim 362 was previously cancelled.

363. (Previously Presented) The mobile station location system of Claim 163, wherein $\mathbf{E_1}$ is obtained from the first estimating source, **ES1**, and said $\mathbf{E_2}$ is obtained from the second estimating source, **ES2**.

Claim 364 was previously cancelled.

365. (Previously Presented) The mobile station location system of Claim 163, wherein said first data includes one or more first data values that provide information descriptive of location processing for locating M_0, and second data includes one or more second data values that provide information descriptive of location processing for locating M_0;

wherein the at least some of said first data values and the at least some of said second data values have a common predetermined semantics for their interpretation.

366. (Previous Presented) The mobile station location system of Claim 163, wherein the at least some mobile stations located by **ES1**, and the at least some mobile stations located by **ES2** are identical.

367. (Previously Presented) The mobile station location system of Claim 163, wherein each of said **ES1** and **ES2** substantially resides with one of: (1) one of said plurality of mobile stations, and (2) at a geographically stationary location.

368. (Previously Presented) The mobile station location system of Claim 367, wherein one or more of: (a) **ES1** substantially resides with a mobile base station, (b) **ES2** substantially resides with a mobile station, (c) at least one of **ES1** and **ES2** provides a corresponding one $\mathbf{E_1}$ and $\mathbf{E_2}$ from a location that is remote from the location system, and (d) one of **ES1** and **ES2** are accessible via the Internet.

369. (Previously Presented) The apparatus of Claim 169 wherein said first data includes one or more first data values that provide information descriptive of location processing for locating $\mathbf{M_0}$, and second data includes one or more second data values that provide information descriptive of location processing for locating $\mathbf{M_0}$;

wherein the at least some of said first data values and the at least some of said second data values have a common predetermined semantics for their interpretation.

370. (Previously Presented) The location system of Claim 106, wherein said mobile station **M** is different from at least one of the one or more mobile stations used for obtaining said wireless signal data of (a2).

Claims 371 and 372 were previously cancelled.

373. (Previously Presented) The method of Claim 121, including receiving the instances $\mathbf{I_1}$ and $\mathbf{I_2}$ at a common predetermined interface.

Please amend claim 374 as follows:

374. (Currently Amended) The method of Claim 121, further including at least some of the following steps:

(i) activating at least one common predetermined mobile station location related component for determining each of said first and second resulting location estimates, wherein the location related component is not activated for locating the mobile station until after at least one of said instances $\mathbf{I_1}$ and $\mathbf{I_2}$ is obtained;

(ii) providing information for activating the first and second location techniques, wherein said information for activating is output by a predetermined common activation component that routes said information for activating to the first and second location techniques; and

(iii) said step of determining includes, for the instances $\mathbf{I_1}$ and $\mathbf{I_2}$, accessing at least a portion of a predetermined common data structure that specifies at least most location related attributes of said instances $\mathbf{I_1}$ and $\mathbf{I_2}$, wherein the location related attributes do not identify a geographical location; and

(iv) said step of determining includes, for at least one of said first and second resulting location estimates, ~~determining~~ obtaining an attribute indicative of one or more of: an error in a geographical extent for locating the mobile station, an accuracy in a geographical extent for locating the mobile station, and a likelihood of the mobile station being located in the at least one resulting estimate.

375. (Previously Presented) The method of Claim 121, wherein said step of receiving includes receiving descriptor information providing information related to the processing performed for determining one or more of said instances $\mathbf{I_1}$ and $\mathbf{I_2}$.

Claim 376 was previously cancelled.

377. (Previously Presented) The method of Claim 142, wherein said second estimator is dependent upon a result from the second location technique included in a different one of the following (a) through (e) location technique categories from the first set.

378. (Previously Presented) The method of Claim 142, wherein said second estimator uses at least one of the location techniques from one of the location technique categories (a) through (e) to obtain, for at least some instance of locating one of the mobile stations (M_j), a location estimate that is effectively different from a corresponding location estimate of M_j by said first location estimator.

379. (Previously Presented) The method of Claim 99, wherein said second location information is not dependent upon any geographical information for locating the second mobile station from at least one of the first, second, third, and fourth techniques for locating the first mobile station.

380. (Previously Presented) The method of Claim 350, wherein for at least one occurrence of locating one of the mobile stations, said first and second instances include different geographical extents for locating the one mobile station.

381. (Previously Presented) The method of Claim 350, wherein said location $\mathbf{L_1}$ and said location $\mathbf{L_2}$ are substantially identical.

382. (Previously Presented) The method of Claim 350, wherein said location $\mathbf{L_1}$ and said location $\mathbf{L_2}$ are effectively different locations of the mobile station **M**.

Claim 383 was previously cancelled.

384. (Previously Presented) The method of Claim 350, wherein said location $\mathbf{L_M}$ is effectively one of said location $\mathbf{L_1}$, and said location $\mathbf{L_2}$.

385. (Previously Presented) The method of Claim 384, wherein said location $\mathbf{L_M}$ is effectively identical to each of said location $\mathbf{L_1}$ and said location $\mathbf{L_2}$.

386. (Previously Presented) The method of Claim 350, wherein said location $\mathbf{L_M}$ is a location of the mobile station **M** for a time subsequent to a time for the mobile station **M** being at one or more of said location $\mathbf{L_1}$ and said location $\mathbf{L_2}$.

387. (Previously Presented) The method of Claim 350, wherein said location $\mathbf{L_M}$ is a location of the mobile station **M** for a time subsequent to a time for the mobile station **M** being at each of said location $\mathbf{L_1}$ and said location $\mathbf{L_2}$, wherein said location $\mathbf{L_1}$ and said location $\mathbf{L_2}$ are substantially different.

Claims 388 through 396 have been previously cancelled.

397. (Previously Presented) The method of Claim 128, wherein said step of outputting includes preferring one of said first and second location information over the other.

398. (Previously Presented) The method of Claim 128, wherein said step of outputting includes combining said first and second location information when both are available for locating the mobile station at substantially a same time.

399. (Previously Presented) The method of Claim 97, further including for at least one instance ($\mathbf{M_i}$) of the mobile station **M**, the following steps:

second obtaining, from a second set of said one or more location evaluators, a second collection of one or more location estimates for $\mathbf{M_i}$ using values obtained from wireless signal measurements, wherein at least one of the location estimates of the second collection is not substantially dependent upon any location estimate from the first collection for $\mathbf{M_i}$; and

determining, as part of said resulting information for $\mathbf{M_i}$, a resulting location estimate of the mobile station for $\mathbf{M_i}$, wherein said resulting location estimate is dependent upon: (a) a first data obtained from said first collection of location estimates for $\mathbf{M_i}$, and (b) a second data obtained from said second collection of location estimates for $\mathbf{M_i}$.

400. (Previously Presented) The method of Claim 399 wherein said resulting location estimate for $\mathbf{M_i}$ is a result of one of: a combination of the first data and the second data, a comparison of the first and second data, and a preference for one of the first and second data.

401. (Previously Presented) The method of Claim 159, wherein for locating said mobile station **M**, said step of generating is dependent upon an output from the corresponding instance of the first technique (B1), and the range between the mobile station **M** and the communication station $\mathbf{CS_M}$ is determined at a site different from the unknown location of the mobile station **M**.

402. (Previously Presented) The method of Claim 165, wherein at least most of the limitations (a) through (m) hold.

403. (Previously Presented) The location system of Claim 163, wherein said means for determining includes said selector.

404. (Previously Presented) The location system of Claim 163, wherein said means for determining includes said combiner.

Please amend Claim 405 as follows.

405. (Currently Amended) The location system of Claim 163, wherein said means for determining ~~resulting estimator~~ includes both said selector and said combiner.

406. (Previously Presented) The system of Claim 337, wherein said selector uses at least two of the preferences (i) through (iv).

407. (Previously Presented) The system of Claim 337, wherein said selector uses at least most of the preferences (i) through (iv).

408. (Previously Presented) The system of Claim 341, wherein said most likely estimate is a function of at least some of: the expected likeliness of (i), and the outputs of (ii) through (iv).

409. (Previously Presented) The method of Claim 343, wherein said output criteria includes at least three of (a) through (e).

410. (Previously Presented) The method of Claim 374, further including at least said step (iii).

411. (Previously Presented) The method of Claim 99, wherein there is at least one technique, **T**, of said first, second, third, and fourth techniques, such that said first location information **FLI** is dependent upon a first geographical information from an instance of said at least one technique **T**, and wherein said second location information **SLI** for the second mobile station is dependent upon at least one geographical extent, wherein the at least one geographical extent is not dependent upon: any geographical extent, **G,** for identifying the second location such that **G** is determined by any instance of said at least one technique **T**.

Please amend Claim 412 as follows.

412. (Currently Amended) A method for locating a plurality of wireless mobile stations using wireless signals, wherein each of a plurality of terrestrial stations is available for at least wirelessly detecting wireless transmissions from the mobile stations;

wherein there are first and second mobile station location techniques, wherein each of said location techniques is capable of providing a location estimate for each mobile station of at least some of said mobile stations when the location technique is supplied with corresponding data obtained from wireless signal measurements indicative of the mobile station's location;

wherein (a) and (b) following:

(a) the first location technique determines first location related information for each mobile station ($\mathbf{M_a}$) of some of the plurality of mobile stations ~~designating~~, using values that are indicative of a signal time delay between the mobile station $\mathbf{M_a}$ and one or more of the terrestrial stations, wherein two way signal communication between $\mathbf{M_a}$ and at least one of the one or more of the terrestrial stations is established for obtaining the signal time delay,

wherein the first location technique determines the first location related information by determining a geographical extent, or location, common to a plurality of loci of locations, each locus determined using locations satisfying one or more predetermined location equations, each of the equations dependent upon the values for offsetting a corresponding one of the loci from at least one of the terrestrial stations, and

(b) the second location technique determines second location related information, for each mobile station ($\mathbf{M_b}$) of some of the plurality of mobile stations, using wireless signals received by

$\mathbf{M_b}$, or another of the plurality of mobile stations ($\mathbf{M_c}$), from a plurality of non-terrestrial transmitting stations above and not supported on the Earth's surface,

wherein for each of a plurality of the non-terrestrial transmitting stations, said second location related information is dependent upon corresponding spatial range data between: (i) $\mathbf{M_b}$ or the another mobile station $\mathbf{M_c}$, and (ii) the non-terrestrial transmitting station,

wherein each of the spatial range data is determined using a corresponding transmission time for a wireless signal transmitted by a corresponding one of the non-terrestrial transmitting stations and received by the mobile station $\mathbf{M_b}$ or $\mathbf{M_c}$,

comprising:

first receiving, at a node of a network, an instance ($\mathbf{I_1}$) of the first location related information as an output by an implementation of the first location technique, the instance $\mathbf{I_1}$ including a first estimate of a location for a first of the mobile stations at a time ($\mathbf{T_1}$) and at an actual location ($\mathbf{L_1}$), wherein the first mobile station is an instance of $\mathbf{M_a}$;

wherein if any location estimate (**LE**) for the first mobile station at time $\mathbf{T_1}$ and the location $\mathbf{L_1}$ is received at the node, wherein **LE** is included in second location related information for an implementation of the second location technique, then **LE** is received at the node as different data from that of the receiving of the first estimate in the first receiving step;

second receiving at the node, an instance ($\mathbf{I_2}$) of the second location related information as an output by an implementation of the second location technique, the instance $\mathbf{I_2}$ including a second estimate of a location for a second of the mobile stations at a time ($\mathbf{T_2}$) and at an actual location ($\mathbf{L_2}$), wherein the second mobile station is an instance of $\mathbf{M_b}$;

wherein the implementation of the second location technique also uses data indicative of a range of the second mobile station relative to one of the terrestrial stations for determining the second estimate ~~indication~~;

performing at the node, for each the instances $\mathbf{I_1}$ and $\mathbf{I_2}$, at least one computation that is dependent on a geographical location of a corresponding one of the first and second mobile stations;

wherein at least one of: (a) the first and second mobile stations are different, (b) the actual locations $\mathbf{L_1}$ and $\mathbf{L_2}$ are different, and (c) the times $\mathbf{T_1}$ and $\mathbf{T_2}$ are different;

first transmitting, to a first predetermined destination of the network, first resulting information for locating the first mobile station, wherein the first resulting information is obtained using the instance $\mathbf{I_1}$ of said first location related information; and

second transmitting, to a second predetermined destination of the network, second resulting information for locating the second mobile station, wherein the second resulting information is obtained using the instance $\mathbf{I_2}$ of said second location related information.

413. (Previously Presented) The method of Claim 412, wherein for the second mobile station, the implementation of the second location technique is improved by the data indicative of a range of the second mobile station from the one terrestrial station, and the one terrestrial station is stationary.

414. (Previously Presented) The method of Claim 412, wherein the first and second receiving steps receive each of the instances $\mathbf{I_1}$ and $\mathbf{I_2}$ in a common predetermined location related data format, wherein for a mobile station (**M**) being located, the format includes the following fields:

(a) a geographical location estimate of **M**;

(b) a timestamp; and

(c) a measurement indicative of the likelihood of **M** being in the geographical location estimate.

415. (Previously Presented) The method of Claim 414, wherein the common predetermined location related data format includes a descriptor from a source of the geographical location estimate, wherein the descriptor includes information descriptive of a reason or process performed at the source.

416. (Previously Presented) The method of Claim 412, wherein at least one of the loci is determined at a location different from that of the first mobile station, and

wherein the range of the second mobile station is determined using a wireless signal time difference of arrival.

Please amend Claim 417 as follows.

417. (Currently Amended) The method of Claim 412, wherein said first and second mobile stations are different.

418. (Previously Presented) The method of Claim 417, further including a step of receiving an additional location estimate of the first mobile station, and further including a step of determining the first resulting information using a preference for one of the first estimate and the additional location estimate.

419. (Previously Presented) The method of Claim 412, wherein said locations $\mathbf{L_1}$ and $\mathbf{L_2}$ are different.

420. (Previously Presented) The method of Claim 412, wherein said first and second mobile stations are the same.

421. (Previously Presented) The method of Claim 420, wherein each of the first and second estimates is substantially unaffected by the other.

422. (Previously Presented) The method of Claim 412, wherein said times $\mathbf{T_1}$ and $\mathbf{T_2}$ are different.

423. (Previously Presented) The method of Claim 412, wherein at least one of the first and second receiving steps receives its corresponding instance $\mathbf{I_1}$ or $\mathbf{I_2}$ via a transmission on the network.

424. (Previously Presented) The method of Claim 423, further including a step of receiving at the node, at least one request via the network for locating one of the first and second mobile stations.

425. (Previously Presented) The method of Claim 424, further including a step of requesting at least one of the instances $\mathbf{I_1}$ and $\mathbf{I_2}$ via a transmission on the network.

426. (Previously Presented) The method of Claim 424, wherein the first and second transmitting steps are from the node.

427. (Previously Presented) The method of Claim 412, wherein the output by an implementation of the first location technique is designated by the implementation of the first location technique for network routing to the node, and wherein the output by an implementation of the second location technique is designated by an implementation of the second location technique for network routing to the node.

Please amend Claim 428 as follows.

428. (Currently Amended) The method of Claim 412, wherein the performing step includes determining the first or second predetermined destination as a destination (DST) on the network, the destination DST being ~~that is~~ dependent on a geographical location of a corresponding one of the first and second mobile stations.

429. (Previously Presented) The method of Claim 412, wherein the node includes a wireless location gateway.

Please amend Claim 430 as follows.

430. (Currently Amended) The method of Claim 412, further including [[a]] steps of:

third receiving at the node, additional location related information output by some location technique activated for locating an additional one of the mobile stations, the third location related information for the additional mobile station at a time ($\mathbf{T_3}$) and at an actual location ($\mathbf{L_3}$); and

accessing at least one value indicative of a performance of the additional location related information in locating the additional mobile station.

431. (Previously Presented) The method of Claim 412, wherein at least one of the first and second transmitting steps transmit at least one of said first and second resulting information via TCP/IP.

432. (Previously Presented) The method of Claim 412, wherein said second resulting information for said second mobile station includes a timestamp indicative of when said second resulting location information is applicable to the location $\mathbf{L_2}$ of said second mobile station.

433. (Previously Presented) The method of Claim 412 further including a step of including in said second resulting information, presentation information for presenting on one or more graphical displays, wherein a map is concurrently displayed in at least one of said displays.

434. (Previously Presented) The method of Claim 412 further including a step of providing for at least one of said first and second resulting information, a presentation for presenting on a visual display, wherein said presentation includes information related to a corresponding mobile station location accuracy or reliability of one of said first and second mobile stations.

435. (Previously Presented) The method of Claim 412, further including the steps of:

determining a location estimate of one of the first and second mobile stations, said location estimate obtained as a function of a position of a known geographical feature different from the terrestrial stations, and

providing the location estimate as part of a corresponding one of the first and second resulting information for the one mobile station.

436. (Previously Presented) The method of Claim 412, wherein said first and second mobile stations are each in two way communication with a commercial mobile radio service provider via at least one of

said plurality of terrestrial stations provided by base stations of the commercial mobile radio service provider.

Please amend Claim 437 as follows.

437. (Currently Amended) The method of Claim 412 further including for the second resulting information, ~~including~~ presentation information, wherein said presentation information is determined according to an expected accuracy of said second resulting information.

438. (Previously Presented) The method of Claim 412, further including the steps of:

receiving an additional location estimate of the first mobile station after receiving the instance $\mathbf{I_1}$; and

obtaining for the additional location estimate, an additional resulting information for transmitting to the first predetermined destination, wherein the additional resulting information includes presentation information for indicating a change in location accuracy from the first resulting information.

439. (Previously Presented) The method of Claim 412, further including a step of receiving a resulting location for at least one mobile station (**M**), different from, or one of, the first and second mobile stations, wherein the resulting location is obtained from a performance of a third location technique for determining mobile station locations, wherein (1) through (3) following hold:

(1) the third technique is dependent upon signal data, wherein the signal data is obtained from wireless signals communicated between the mobile station **M** and the plurality of terrestrial stations;

(2) the third technique is dependent upon (2-i) and (2-ii) following: (2-i) a representation of each of a plurality of geographical locations, and (2-ii) for each of the geographical locations, corresponding wireless signal information previously obtained using transmissions between some mobile station, different from **M**, and the plurality of terrestrial stations, when the some mobile station transmits from approximately the geographical location, and

(3) the third technique uses the signal data for determining one or more likely location estimates for **M** by identifying a similarity in a pattern between (3-i) and (3-ii) following: (3-i) one or more wireless signal characteristics of the signal data, and (3-ii) the information of (2-ii) for a collection of one or more of the plurality of geographical locations.

440. (Previously Presented) The method of Claim 412, further including a step of providing a network transmission for modifying at least one installed implementation of the first location technique at a remote site.

441. (Previously Presented) The method of Claim 412, further including at least some of the following steps:

(i) activating at least one common predetermined mobile station location related component for determining each of the first and second resulting information, wherein the location related component is not activated for locating a corresponding one of the first and second mobile stations until after at least one of said instances I_1 and I_2 is obtained;

(ii) providing information for activating the implementations of the first and second location techniques, wherein said information for activating is output by a predetermined common activation component that routes said information for activating to the implementations of the first and second location techniques;

(iii) for the instances I_1 and I_2, a further step of accessing at least a portion of a predetermined common data structure that specifies at least most location related attributes of said instances I_1 and I_2, wherein the location related attributes do not identify a geographical location; and

(iv) for at least one of said first and second resulting information, a further step of determining an attribute indicative of one or more of: an error in a geographical extent for locating a corresponding one of the first and second mobile stations, an accuracy in a geographical extent for locating the corresponding one of the first and second mobile stations, and a likelihood of the corresponding one of the first and second mobile stations being located by a location estimate of the at least one of the first and second resulting information.

442. (Previously Presented) The method of Claim 179, wherein for at least one location (**L**) of the mobile station, a corresponding location estimate is received, wherein the corresponding location estimate is dependent upon an instance of the wireless timing signals of (a), and is dependent upon an instance of time delays of wireless signals of (b).

443. (New) The method of Claim 179, wherein the data for the graphical presentation includes information for displaying an indication related to an accuracy of one or more locations of the mobile station.

444. (New) The method of Claim 179, wherein the step of obtaining includes receiving from a location estimator an instance ($\mathbf{I_1}$) of the location related information, wherein the location estimator uses the wireless timing signals for determining a spatial relationship between the mobile station and each of the satellites.

445. (New) The method of Claim 444, wherein the instance $\mathbf{I_1}$ is determined using additional data for improving on location information of the wireless timing signals of (a), wherein said additional data is received by the mobile station in a wireless communication between: the mobile station, and one of terrestrial transceivers.

446. (New) The method of Claim 444, wherein the step of obtaining includes receiving from a location estimator an instance ($\mathbf{I_2}$) of the location related information, wherein the instance $\mathbf{I_2}$ is obtained from the time delays of the wireless signals of (b), wherein a time difference of arrival of the wireless signals between the mobile station and some of the transceivers is determined.

447. (New) The method of Claim 374, wherein at least three of the steps (i) through (iv) are performed.

448. (New) The method of Claim 140, further including a step of preferring information for the first location estimate over information for the second location estimate.

449. (New) The method of Claim 121 further including one or more of:

(a) modifying a confidence for at least said second resulting location estimate depending upon a consistency with previous location estimates along a known route; and

(b) comparing data of said second resulting location estimate with a second data of a location estimate obtained from location information output by a location estimator different from a location estimator from which the second location information is received, wherein the data of said second resulting location estimate, and the second data are each one of: a velocity and an acceleration; and modifying a confidence of said second resulting location estimate depending upon a consistency between the data of said second resulting location estimate and the second data.